This article proposes that the bei-construction, a typical passive construction in Mandarin Chinese, is not derived in a uniform fashion; rather, three types of bei-sentences must be recognized. The main distinction is made between those involving A-movement, like English passives, and those involving a null operator, like the tough-construction and the Complement Deletion Construction in English. The third type involves a lexical passive compound verb. Support for this claim comes from investigation of the facts regarding licensing of a post-verbal overt pronominal object, locality effects, the occurrence of the particle suo in the bei-construction, and the intervention of adverbs within the bei-V sequence. This article also shows the problems in previous analyses that derive the bei-construction from the same underlying structure.

1. INTRODUCTION

This article studies a typical passive construction in Mandarin Chinese, namely the bei-construction, and aims to provide a proper analysis of its derivation. Previous analyses of this construction all adopt an approach under the null hypothesis that bei-sentences are derived from the same underlying structure. This prevailing view, however, gives rise to quite a few problems and fails to provide an adequate analysis of the bei-construction. Contrary to this uniform approach, I will argue that the bei-construction in Chinese is not derived in a uniform fashion. Three types of bei-sentences must be recognized, based on how the bei-construction is derived. The main distinction is made between bei passives with and without lexical logical subjects. The former involve a null operator, like the tough-construction and the Complement Object Deletion Construction in English, and the latter involve A-movement, which Cheng, Huang, Li and Tang (1993, henceforth CHLT) argue to be on a par with the get-passive in English. I will propose that bei is a verb and that these two types of passive result from two bei's with different selectional properties. The third type of passive involves a lexically derived bei-V compound (see Reynolds (1995)) on a par with other V-V compounds in Mandarin. This analysis will be shown to account nicely for the otherwise mysterious properties of the bei-construction, including licensing of the post-verbal overt object pronoun, locality effects, the occurrence of the particle suo, and the intervention of adverbial elements within the bei-V sequence, among others.
2. Properties of the Bei-Construction in Chinese and Previous Analyses

2.1. The A-movement Approach

The bei-construction refers to sentences containing the morpheme bei and is regarded as a typical passive construction in Chinese. For the purpose of this article, a passive sentence is the counterpart of an active sentence, in which the patient argument of the transitive verb appears as the grammatical subject, while the agent argument of the transitive does not appear overtly in an argument position. This change in grammatical function between active and passive sentences can be illustrated by English examples in (1).

(1) a. Mary criticized John.
    b. John was criticized by Mary.
    c. John was criticized.

The active sentence (1a) has the agent NP Mary and the patient NP John in the subject and the object position, respectively. In the passive sentences (1b, c), on the other hand, the subject position is occupied by the patient NP, while the agent NP is either introduced by the preposition by (1b) or not overtly present (1c). A similar grammatical function change can be observed between the bei-construction (2) and its active counterpart (3) in Mandarin Chinese.

(2) a. Zhangsan bei Lisi piping-le.
    Zhangsan BEI Lisi criticize-ASP
    ‘Zhangsan criticized Lisi.’

(b) Zhangsan bei piping-le.
    Zhangsan BEI criticize-ASP
    ‘Zhangsan was criticized.’

Like the English passives in (1b, c), the bei-sentences in (2) contain patient NPs that occur in the grammatical subject position. The agent NP, on the other hand, is either introduced by bei (2a) or not overtly present (2b). For convenience, passives with an overt logical subject, as such as in (1b) and (2a), will be referred to as the “long passive”, and those without, such as in (1c) and (2b), will be referred to henceforth as the “short passive”.

Given the similar grammatical function change between active and passive sentences in English and Mandarin Chinese, it thus appears plausible to extend the analysis of the English passive to the bei-construction in Chinese to a certain extent. This is the line of reasoning pursued by Huang (1982) and A. Li (1985, 1990). In the principles-and-parameters framework adopted in this article, it is in general agreed (see for example, Chomsky (1981, 1986b), Jaeggli (1986), Roberts (1987), Baker et al. (1989), among others) that the English passive involves A-movement, as illustrated in (4).

(4) [5 John, was criticized t₁ (by Mary)]

The complement NP John of the passive verb is forced to move to the subject position by the Case filter, given the assumption that the passive verb has lost its Case-assigning ability in a passive sentence due to the presence of the passive morpheme. The passive morpheme is also assumed to be responsible for the “suppression” of the subject theta-role of the passive verb. The “suppressed” subject theta-role is realized as an implicit argument associated with an optional adjunct by-NP.

Turning to the bei-construction in Mandarin Chinese, given the fact that the subject position in the bei-construction is also occupied by the patient argument NP as in the English passive construction, it seems plausible to analyze the subject of the bei-construction as derived by A-movement from the complement position of the passive verb such as in (5).

(5) [5 Zhangsan, bei (Lisi) piping-le t₁]
    Zhangsan BEI Lisi criticize-ASP
    ‘Zhangsan was criticized (by Lisi).’

The A-movement approach to the derivation of the bei-construction, however, runs into problems with the non-gapped (Feng (1990)) and the non-local passive (Feng (1990), Y. Li (1991a)). The former refers to bei-
passes containing an overt logical object pronominal which is co-indexed with the subject of the bei clause in the complement position of the "passivized" verb, as illustrated in (6).

(6) 3Zhangsan be wo piping-le ta, yidon
Zhangsan BEI I criticize-ASP he once
‘Zhangsan was criticized once by me.’

In spite of their marginality, many people find such sentences basically acceptable. Under the A-movement analysis, the overt pronominal ta ‘he’ in (6) must be taken as alternating with the A-trace in a gapped passive. This account contradicts the general agreement that A-movement does not allow a pronominal in place of its trace, as shown by the ill-formedness of (7). Since the gap in the bei-sentence may alternate with an overt pronoun, it does not behave like a typical A-trace.

(7) 3John was criticized him once.

The non-local passive in (8a), on the other hand, also poses problems for the A-movement analysis because in the structure illustrated in (8b) the gap associated with the subject of the bei clause is contained in the complement clause of a “passivized” object control verb.

(8) a. Lisi bei Zhangsan pai wo zhua-zou-le
   Lisi BEI Zhangsan sent I catch-ASP
   ‘Lisi was affected by Zhangsan’s sending me to catch him.’

b. [Lisi bei Zhangsan pai wo, [CP [IP PRO zhua-zou-le [c],]]]

Under the A-movement analysis, it is not clear why the presumed NP trace can be separated from its antecedent by an intervening subject. It is well known that A-movement is strictly local (Chomsky (1986a), Cinque (1990), Rizzi (1990), Lasnik and Saito (1992), Manzini (1992), among others). Thus, so-called “super-raising”, crossing an intermediate subject, as in (9), is ill-formed.

(9) 3John, appears that [it is likely [t, to win]]

The locality effect displayed by A-movement can be achieved in several ways. Chomsky (1982) suggests that the A-trace is constrained by the Binding Condition A. Rizzi (1990), on the other hand, provides an account by relativized minimality. Whatever is the reason, A-movement must be strictly local. The locality behavior of A-movement thus casts doubt on the A-movement analysis of the non-local passive in (8) because the movement crosses the intervening PRO subject, violating locality conditions on A-movement. If brief, the a-movement approach cannot easily account for the non-gapped and the non-local bei-sentences.

2.2. The A’-Dependency Approach

In order to provide an account accommodating these passives, the A’-dependency approach is motivated. This approach was first formulated by Feng (1990) and later modified and amended by Chiu (1993) and Ting (1993). The essence of this approach is that the derivation of the bei-construction involves an A’-configuration like that of the tough-construction in English (10).

(10) The book1 is tough [CP Op1 [[for us] to read t1]]
    (Chomsky (1981))

These analyses, despite variation among them, all assume that bei is a verbal category taking a clausal complement containing a null operator, as illustrated in (11).

(11) [IP Zhangsan1 [VP bei [XP Op1 . . . Lisi piping-le . . . t1,]]]
    Zhangsan BEI Lisi criticize-ASP

The non-gapped passive and the non-local passive in Chinese are now naturally accounted for under the A’-dependency approach. A’-movement is known to be non-local. Furthermore, an operator in an A’-position may bind a pronominal (see Sells (1984), Engdahl (1985), Demirdache (1991), among others for discussion). These two characteristics of an A’-configuration are illustrated by relative clauses in (12a) and (12b), respectively.

(12) a. Zhe jiushi [[[Zhangsan pai wo zhua-le t, huilai]]
   this is Zhangsan send I catch-ASP back
de Op1, neige nanren1,
DE that man
   ‘This is the man that Zhangsan sent me to catch back.’

b. Zhe jiushi [[[Zhangsan piping-le ta, yidon] de Op1,]
   this is Zhangsan criticize-ASP he once DE
   neige nanren1,
that man
   ‘This is the man that Zhangsan criticized him once.’

The parallelism between relative clauses and the bei-construction is
obvious: in both instances, an overt pronominial may take the place of the gap, and there is a non-local relation between the gap and the co-indexed NP. The A’-dependency analysis of the bei-construction is thus supported. Appealing as it appears, however, this approach, is inadequate in that it does not account for the obligatory presence of the lexical subject immediately preceded by bei in these passives. The fact that the non-gapped and the non-local passives require a lexical logical subject immediately preceded by bei is shown by the ill-formedness of (13a) and (13b), observed by Feng (1990) and Y. Li (1991a), respectively.

(13) a. *Zhangsan1, bei piping-le ta1 yidun. Zhangsan BEI criticize-ASP he once
    ‘Zhangsan was criticized once.’

b. *Lisi bei pai wo zhua-zou-le. Lisi BEI send I catch-away-ASP
    ‘Lisi was affected by someone’s sending me to catch [him] back.’

Under Chiu’s (1993) and Ting’s (1993) analysis, the non-overt logical subject in the short passive is represented as a pro. As their theories stand, it is not immediately clear how the non-overt pronoun would block the proposed A’-dependency relation in the non-gapped and the non-local bei-sentences, as roughly represented in (14).

(14) [ip Zhangsan1, [vp bei [xp Op1 . . . pro piping-le . . . ta1]]]
    Zhangsan BEI criticize-ASP he

[ip Zhangsan1, [vp bei [xp Op1 . . . pro pai wo2]]]
    Zhangsan BEI send I

[[PRO2 zhua-zou-le [e1]],[]]
    catch-away-ASP

To account for the obligatory presence of the lexical subject in the non-gapped passive, Feng (1990) claims that passives with and without a lexical logical subject have different structures. While the long passive is bi-clausal, the short passive becomes mono-clausal as a result of a transformational rule in (15). This rule reanalyzes bei and the following element as a compound. If the following element is a transitive verb, it will lose its Case-assigning ability after this reanalysis process.

    (= Feng (1990) 3.14, p. 9)

Given the rule in (15), short passive is transformed from a bi-clausal (16a) to a mono-clausal (16b).

(16) a. Zhangsan1, [bei [Op1, [c, da-le e1]]]
    Zhangsan BEI hit-ASP
    (= Feng (1990) 3.16, p. 10)

b. Zhangsan1, [[bei-da] e1]
    Zhangsan BEI-hit
    (= Feng (1990) 3.17, p. 10)

Under this analysis, the short passive does not license an object pronoun because it can’t get assigned Case by the bei-V string in (17).

(17) *Zhangsan1, [[bei-da]-le ta1]  (= Feng (1990) 3.11, p. 10)
    Zhangsan BEI-hit-ASP he

In brief, Feng’s (1990) account of the obligatory presence of the lexical logical subject falls into two respects. First, he recognizes the structural difference between passives with and without the lexical logical subject and derives this difference by a transformational rule that alters a bi-clausal structure into a mono-clausal one. Furthermore, in passives without a lexical logical subject, bei crucially forms a compound with the following element, usually a verb. After the compounding process, a transitive verb can no longer assign Case. This explains the impossible occurrence of the post-verbal object pronoun in the short passive. This analysis is insightful in that it recognizes that the long and the short passive have different structures. However, it is theoretically problematic to account for this structural difference by a structure-altering rule in the principles-and-parameters framework. I will argue in section 4 that this structural difference is not derived by a transformational rule but rather follows from two lexically different bei’s. With respect to the second aspect of Feng’s account, I will show below that the compounding rule for deriving the short passive is empirically problematic. In fact, it will be argued in section 4 that the short passive with a free verbal morpheme does not involve any generally assumed type of compounding.

Consider examples in (18), which show that bei and the following verb may be separated by a manner adverb (18a), a subject-oriented adverb (18b), or a PP (18c).

(18) a. Zhangsan bei henhende piping-le yidun. Zhangsan BEI severely criticize-ASP once
    ‘Zhangsan was severely criticized once.’
b. Zhangsan bei guī piping-le ta₁ yidun.
   Zhangsan BEI delirately criticized-ASP once
   'Someone deliberately criticized Zhangsan once.'

c. Neizhi chuan bei cong hai-li lao chu-lai-le.
   that ship BEI from sea-inside dredge out-ASP
   (= Feng (1990) 2.5, p. 4)
   'That ship was dredged out of the sea.'

Given the reanalysis rule proposed by Feng (1990), bei should form a
compound with the following adverb or PP in these instances, and the Case-
assigning ability of the verb shouldn’t be affected. If this is correct, then
an object pronoun is expected to be licensed in short passives such as
(18). This prediction, however, is not borne out, as evidenced by the il-
ferredness of (19). The reanalysis rule is thus not empirically adequate
in addition to its theoretic weakness.

(19) *Zhangsan₁ [bei henhende] piping-le ta₁ yidun.
   Zhangsan BEI severely criticize-ASP he once
   'Zhangsan was severely criticized once.'

Summarizing this section, the bei-construction in Mandarin Chinese
has the following properties. Consider the word order string in (20).

(20) NP₁ ... bei (NP₂) ... V ... NP₃

Like English passives, the "passivized" verb is transitive, the internal
argument of this verb occurs as the grammatical subject of the passive
clause, i.e., NP₁ in (20) and the external argument NP₂ is either intro-
duced by bei or does not occur. When the external argument does not
occur, bei remains obligatory. In this case, bei and the "passivized" verb
need not be adjacent and may be separated by certain adverbial elements.
The complement position of the "passivized" verb, i.e., NP₃, may be left
empty or be occupied by an overt pronominal co-indexed with NP₁. This
is referred to as the "non-gapped passive" in Mandarin Chinese.
Furthermore, when the "passivized" verb is an object control verb, NP₃ may
be contained in its complement clause. This is referred to as the "non-
local passive" in Mandarin Chinese. These two types of passives crucially
require the lexical logical subject preceded by bei, i.e., NP₂ in (20).

We have argued that none of the previous analyses accounts for all the
properties of the bei-construction noted above. It is certainly desirable if
all these properties can be consistently explained. In the rest of this article,
pursuing the insight of Feng (1990) that bei-sentences with the without
the lexical logical subject have different structures, I will argue that they
start out with two verbal bei's with different selectional properties. As a
result, the long passive has an A'-configuration involving a null operator
similar to the tough-construction in English whereas the short passive
involves A-movement, which, adopting CHLT’s (1993) suggestion, is on a
par with get-passives in English. In the next section, I will first estab-
lish this A vs. A' structural distinction between the short and the long
passive. In section four, I will provide a plausible analysis of their internal
structures.

3. The A/A' Distinction Between Short and Long Passives

I will argue that the short passive involves A-movement. The long passive,
on the other hand, involves an A'-configuration containing a null operator,
which binds a variable or an overt pronoun.

3.1. The Licensing of the Post-Verbal Object Pronoun and Non-Local
Passivization

Recall that non-gapped and non-local passives require a lexical logical
subject preceded by bei. That is, only those bei-sentences in the form of
the long passive allow the internal argument position of the "passivized"
verb, i.e., NP₃ in (20), to be occupied by an overt pronoun or to be
contained in the complement clause of the "passivized" control verb.
Consider the examples with the relevant structures given in (21).6

(21) a. [ip Lisi₁ bei ... Zhangsan ... [vp piping-le ta₁
   Lisi BEI Zhangsan criticized-ASP he
   yidun] once

b. [ip Lisi₁ bei ... Zhangsan ... [vp pai wo₂ [cp [ip PRO₂
   Lisi BEI Zhangsan send I
   zhua-zou-le [el₁,]])]
   catch-away-ASP

Following the general assumption concerning structures involving an
object control verb in the principles-and-parameters framework, I assume
that the verb pai 'send' in (21b) is a two-place predicate, taking both the
object NP wo 'I' and an infinitive CP with a PRO subject as complement.
As reviewed in the previous section, the bei-passives in (21) are naturally accounted for under the A'-dependency approach by pursuing the parallelism between them and the relative clauses in (22).

(22) a. [Zhe jiushi \[CP [Zhangsan piping-le ta yidun] this is Zhangsan criticize-ASP he once
  de Op, ren1]]
  DE person
  ‘This is the person that Zhangsan criticized him once.’

b. [Zhe jiushi [CP [Zhangsan \[VP pai wo2 [CP [IP PRO2
  this is Zhangsan send I
  zhua-zou t1]]] de Op1 ren1]]
  catch-away DE person
  ‘This is the person that Zhangsan sent me to catch.’

Relative clauses are generally analyzed as involving an A'-configuration. As illustrated in (22), the operator in an A' position may bind an overt pronoun in (22a), and the A'-movement of the relative operator in (22b) is legitimate since no barrier is crossed in the sense of Chomsky (1986a). Similar properties exhibited in the bei-constructions in (21) suggest that they also involve an A'-structure. More specifically, I propose that the post-verbal object pronoun in (21a) is bound by an operator in an A'-position and that the EC contained in the complement clause of a control verb is left by null operator movement, as in the relative clauses in (22). Under this analysis the markedness of the non-gapped passive can now be treated on a par with that of the relative clause containing an A'-bound pronoun in (22a).

On the other hand, given this line of reasoning, the short passive must not involve an A'-configuration but is most likely to be derived by A-movement. Recall that in contrast to the long passive, the short passive does not allow the gap at issue to be occupied by an overt pronoun or to be contained in the complement clause of the “passivized” control verb. The examples with the relevant structures are given in (23).

(23) a. [IP Lisi1 bei ... [VP piping-le ta1 yidun]
  Lisi BEI criticize-ASP he once
b. [IP Lisi1 bei ... [VP pai wo2 [CP [IP PRO2
  Lisi BEI send I
  zhua-zou-le [e1,3]]]]
  catch-away-ASP

If the short passive also involves an A'-configuration, the post-verbal pronoun ta 'he' in (23a) and the EC contained in the complement clause of the control verb should be licensed as those in (21a, b), contrary to fact, suggesting that the short passive does not involve an A'-configuration. The ill-formedness of (23a, b), in contrast, follows from the analysis that the short passive is derived by A-movement. As discussed earlier, it is well-known that A-movement does not allow its trace to alternate with an overt pronoun. If the short passive is derived by A-movement, then it follows that the post-verbal object pronoun is not licensed because, unlike an A'-trace, an A-trace does not alternate with an overt pronoun. Furthermore, the fact that the short passive does not allow the gap at issue to be contained in the complement clause of the control verb as in (23b) also follows. Unlike A'-movement, A-movement is known to be local. Under the A-movement analysis of the short passive, the A-trace in (23b) would be too far away from its antecedent, namely the NP Lisi, given whatever locality condition on A-movement.

In summary, it has been argued that the long passive involves an A'-configuration, whereas the short passive involves A-movement. This structural distinction is supported by the facts that the former exhibits A'-properties such as allowing the gap at issue to be occupied by a pronoun or to have a non-local relation with its antecedent, and that the gap in the latter exhibits NP-trace properties such as the incapability of being filled by a pronoun and the requirement of being locally bound by its antecedent. This A-A' structural distinction between the short and the long passive in Mandarin is further supported by the distribution of the particle suo in these two types of passives.

3.2. The Licensing of the Particle Suo

The long passive allows the occurrence of suo (24a) whereas the short passive does not (24b).

(24) a. Zhangsan bei Lisi suo piping.
   Zhangsan BEI Lisi SUO criticize
   ‘Zhangsan was criticized by Lisi.’

b.*Zhangsan bei suo piping.
   Zhangsan BEI SUO criticize
   ‘Zhangsan was criticized.’

The particle suo is analyzed by Chiu (1993, 1995) as a head of an accusative Case projection, and its overt occurrence is triggered by syntactic
movement. Contra this analysis, Ting (1995, 1996) argues that *suo* is a resumptive pronominal clitic. Putting aside the choice between the two analyses, it suffices for the purpose of the argumentation here to note that *suo* is licensed only in the context of a null operator. This observation is supported by the fact that *suo* is allowed in a relative clause (25b) but not in a non-relative clause, such as (26a).

(25) a. [Lisi mai de] neixie shu (= Chiu (1993) 2a, p. 78)  
Lisi buy DE those book
b. [Lisi *suo* mai de] neixie shu (= Chiu (1993) 2b, p. 78)  
Lisi SUO buy DE those book

‘those books that Lisi bought.’

(26) *Lisi *suo* mai neixie shu.  
Lisi SUO buy those book

‘Lisi bought those books.’

Given this description of *suo*, its occurrence in the long passive in (24a) suggests that the derivation of the long passive involves a null operator whereas the short passive (24b) does not. The contrast that the long passive, but not the short passive, licenses the particle *suo* thus supports the analysis that the former involves an A'-configuration whereas the latter involves A'-movement.9, 10, 11

In summary, the licensing of the object pronoun and non-local passivization suggests that the long passive involves an A'-configuration. The licensing of the particle *suo* in the long passive further indicates that the A'-configuration in the long passive involves a null operator, given that *suo* is licensed only in the context of a null operator, such as relative clauses. In fact, evidence based on locality suggests that the null operator in the long passive behaves like the one in the English tough-construction in (27).

(27) The book is tough [OP, [PR to read t₁]].

3.3. The Tensedness Effect in the Long Passive

It is observed by Y. Li (1991a) that non-local passivization is possible only from within infinitive clauses (28a, b) but not from within a finite clause (28c).

(28) a. Zhege shusheng₁ bei guanfu rang this scholar BEI local-government make
[IP shibingmen dasi-le [e₁],]  
soldiers kill-ASP

‘This scholar was affected by the local-government making soldiers kill [him].’

b. Zhege shusheng₁ bei guanfu pai this scholar BEI local-government make
shibingmen₂ [CP [IP PRO₂ dasi-le [e₁],]]  
soldiers kill-ASP

‘This scholar was affected by the local-government making soldiers kill [him].’

c.*Zhege shusheng₁ bei guanfu renwei this scholar BEI local-government think
[CP [IP shibingmen dasi-le [e₁],]]  
soldiers kill-ASP

‘This scholar was affected by the local-government’s thinking that soldiers killed [him].’

As observed by Stowell (1987), the null operator construction in English also exhibits a type of tensedness effect, as illustrated in (29).

(29) a. This book is tough [OP, [PR to read [e₁],]]

b. This car is easy [OP, [PR to believe [IP Betsy to have fixed [e₁],]]]

As opposed to (28c), the non-local operator movement from within an infinitive clause is well-formed whereas it is ill-formed from within a finite clause as in (29c). This behavior of the null operator clearly contrasts with that of an overt wh-operator, which can move either from the infinitive complement clause or finite complement clause, as illustrated by the contrast between (29c) and (30c).

(30) a. What do you read t₁

b. What, do you believe [John to have fixed t₁]

c. What, do you believe [t₁′ that John fixed t₁]
Stowell (1987) to conclude that the null operator must play a role in rendering the marginality of the movement out of the finite clause in (29c).\textsuperscript{12}

Turning to the bei-constructions, we find that a similar tensedness effect arises when the gap is contained in the tensed complement clause, as in (28c). In contrast, the sentences are well-formed when the gap is contained in an infinitive complement clause, whether it is an IP (28a) or CP (28b).\textsuperscript{13}

The parallelism of the locality between the null operator construction and the bei-construction in Chinese suggests that they should be given the same treatment. The tensedness paradigm in the bei-constructions thus further supports the involvement of a null operator in the long passive.\textsuperscript{14}

In brief, the fact that the non-local passive without the overt logical subject preceded by bei in (23b) is ungrammatical can be attributed to the anaphoric property of the NP-trace. On the other hand, the non-local passive with the overt logical subject preceded by bei in (21b) is grammatical because it is an A'-trace and is not subject to locality conditions required of an A-trace. Furthermore, the same type of tensedness effect observed in the long passive and the tough-construction suggests that they should be treated on a par and supports the analysis that a bei-passive with an overt logical subject involves a null operator.

Summarizing this section, it has been established that the long passive in Mandarin, like the tough-construction in English, involves a null operator, whereas the short passive involves A-movement. Given this conclusion, there can be various ways to implement this structural distinction between the long and the short passives in Mandarin. In the next section, I will first discuss the status of the passive morpheme bei and argue for the existence of the third type of passive, namely lexical bei-V compounds. I will then provide a plausible analysis of their internal structures in the current theoretic framework.

4. The Internal Structures of the Bei-Constructions Proposed

4.1. The Categorical Status of the Morpheme Bei

To posit the structures of the bei-constructions, one important task is to determine the status of the passive morpheme bei. In the literature, there have been three types of category proposed for it, i.e., preposition, verb, and inflectional feature like the passive morpheme -en in English.

Bei is treated as a preposition, on a par with the English by, by Li and Thompson (1981) and Cheng (1986), among others. Bei behaves like a preposition in that its position in the clause is on a par with that of a preposition. The bei-NP sequence occurs to the left of the predicate like a PP dui pengyou ‘to friend’ in (31).

(31) Zhangsan zongshi dui pengyou hen youshan.
     Zhangsan always to friend very friendly
     ‘Zhangsan is always nice to friends.’

The preposition analysis of bei, however, runs into three problems. First, consider bei in the short passive. It does not behave like a preposition in this case because it is not followed by an NP, as given in (2b), repeated here as (32). Since a preposition in Mandarin Chinese does not allow stranding, as shown in (33), the fact that bei need not be followed by an NP suggests that it should not be treated as a preposition in the short passive.

(32) Zhangsan bei piping-le.
     Zhangsan BEI criticize-ASP
     ‘Zhangsan was criticized.’

(33) *Zhangsan dui hen youshan.
     Zhangsan to very friendly
     ‘Zhangsan is very friendly to ____.’

Even in the long passive, the bei-NP sequence does not behave like a true prepositional phrase.\textsuperscript{15} True prepositional phrases in Chinese can occur in a pre-subject position, but the bei-NP sequence cannot. The contrast is shown in (34).

(34) a. Dui pengyou, Zhangsan zongshi hen youshan.
     to friend Zhangsan always very friendly
     ‘Zhangsan is always nice to friends.’

b. *Bei Lisi, Zhangsan piping-le.
    BEI Lisi Zhangsan criticize-ASP

Furthermore, as noted by A. Li (1990) and Chiu (1993), the NP preceded by bei has properties of an argument. For example, the NP preceded by bei can bind a subject-oriented anaphor (35a), but an NP in an adjunct PP cannot (35b). This contrast thus indicates that the bei-NP sequence is not an adjunct.

(35) a. Aku, bei Lisi jieshao gei [ziji, v de erzi]
     Aku BEI Lisi introduce to self DE son
     (= Chiu (1993) 15a, p. 88)
     ‘Aku was introduced to self’s son by Lisi.’
b. Akiu, gen Lisi, taolun [ziji, de jingyan]
   Akiu with Lisi discuss self DE experience
   (=Chiu (1993) 15b, p. 88)
   ‘Akiu discussed his own experience with Lisi.’

In brief, while the position of bei in the clause is on a par with that of
a preposition, it does not behave like a true preposition. Another possi-
bility to consider is that it is an inflectional element like the English passive
morpheme -en. This line of analysis is pursued by Goodall (1992) for all
bei-sentences and by Lü et al. (1980) and Feng (1990) for bei-sentences
without the lexical logical subject. The approach taken by Lü et al. (1980)
and Feng (1990) appears plausible in particular because in the short passive,
bei always occurs right before the ‘passivized’ verb. It thus appears rea-
sonable to assume that bei ‘attaches’ to the verb in this case, like the
morpheme -en attaching to the verb in English. But this assumption runs
into problems when the verb is modified by adverbial elements in the
short passive, as in (18). In these examples, bei is not adjacent to the verb.
If it is indeed a Chinese counterpart of the morpheme -en in English, it is
not clear why it does not need to attach to the verb in these instances.
Thus bei should not be treated like -en in English either.

Having ruled out the possibilities for bei as a preposition or an inflec-
tional affix, I now pursue the option that bei is a verbal category. This
line of analysis is addressed by Feng (1990) (for the long passive), Y. Li
(1991a), Chiu (1993) and Ting (1993). Bei used to be a verb denoting ‘to
receive, to suffer,’ in classical Chinese, as illustrated in (36) (see Peyraube
(1989), Zhang (1991), and references cited there).

(36) Zu bei wuxing.
    finally suffer five punishment
    (Shi Ji, quoted from Peyraube (1989), p. 348)
    ‘(He) finally suffered the five punishments.’

It is not easy to show that bei remains a verbal category in Modern
Chinese, however. A. Li (1990) argues that bei is not a verb in modern
Chinese because it does not exhibit any of the properties typical of verbs
in Mandarin Chinese, such as taking an aspect marker, occurring in the
A-not-A form, or being able to serve as a simple answer to a question.
This argument against the verbal status of bei, however, is valid only if
all verbs in Mandarin Chinese exhibit the properties noted above. In fact,
there are verbs that do not show any of those properties. The causative
verb shi ‘make’ is one of them, as illustrated in (37a, b, c).

(37) a.*Zhege xiaozi shi-le Zhangsan hen kaixin.
    this news make Zhangsan very happy
    ‘This piece of news made Zhangsan happy.’

b.*Zhege xiaozi shi-bu-shi Zhangsan hen kaixin?
    this news make-not-make Zhangsan very happy
    ‘Did this piece of news make Zhangsan happy?’

c. *Shi. (As an answer to 37b)
    ‘make.’

Given the behavior of shi ‘make’ in (37), the fact that bei fails to exhi-
bit verbal properties noted by A. Li (1990) thus cannot be taken as evidence
against bei as a verb since there are verbs such as shi also not showing those
properties. However, if bei is indeed a verb, it remains mysterious why
bei does not show those verbal properties, as most verbs do. Pursuing the
analysis that bei is a verb, we may deal with the mystery by reinterpreting
Li and Thompson’s (1981) claim that bei belongs to the class of co-verbs
in Mandarin Chinese. According to them, co-verbs including gen’with’, cong
‘from’, chao ‘facing’, yan ‘along’, li ‘be apart from’ were verbs at earlier
stages of the language and are becoming prepositions in modern Chinese.
Some of them have more verbal properties than the others, depending
on the pace of the transition. Let us assume that bei is a verb in modern
Chinese and that since it is undergoing the process of turning from a verb
to a preposition, it does not behave like most verbs in modern Chinese.

The syntactic behavior of the bei-passives also supports the verbal status
of bei. First consider the non-gapped passive, repeated in (38).

(38) ?Zhangsan, bei wo pipiing-le ta, yidun.
    Zhangsan BEI I criticize-ASP he once
    ‘Zhangsan was criticized once by me.’

As pointed out by Feng (1990), the occurrence of the post-verbal pronom-
nal suggests that this sentence is bi-clausal. As required by the Binding
Condition B, a pronoun should be free in its governing category. If (38)
is mono-clausal, then the pronoun ta ‘he’ would be bound in its governing
category and give rise to a Binding Condition B violation. Since (38) is
not as bad as a typical Binding Condition B violation (39), it must be bi-
clausal.11 The question arises what the matrix predicate is in (38).

(39) *Zhangsan, xihan ta,
    Zhangsan like he
    ‘Zhangsan likes himself.’
Given no other candidate, it appears natural to assume that bei is the matrix predicate in the non-gapped passive (38). The assumption that bei is a verb is also more compatible with other bei-passives than treating bei as a preposition. For example, it has been argued that bei cannot be a preposition in the short passive since prepositions in Mandarin Chinese must be followed by an NP.18

Under the assumption that bei is a verb, how are the long passive and the short passive in Mandarin Chinese derived? Recall that it has been shown in section 3 that the long passive involves an A'-configuration with a null operator whereas the short passive involves A-movement. I will propose that the two types of passives result from two bei’s, say, bei1 and bei2. Both of them are verbal categories but have different lexical properties: the short passive has bei1 selecting a VP whereas the long passive has bei2 selecting an IP.19

4.2. The Structure of the Short Passive

In this section, I discuss the structure of the short passive in Mandarin Chinese. First, I argue that the bei-V sequence in the short passive (with some limited exceptions derived in the lexicon, which will be referred to as lexical compound passives) is not a lexical complex, i.e., it is not formed by attaching bei to the adjacent verb. Rather, bei selects a VP. The “passivized” verb is the head of the VP governed by bei. Given the conclusion reached in section 3 that the short passive in Mandarin involves A-movement, I will then adopt CHLT’s (1993) claim that it is on a par with the get-passive in English.

The passive verbal form V-en in English is a lexical complex and has been assumed to be derived in the lexicon (Bresnan (1982), Chomsky (1995)) or in the syntax (Baker et al. (1989)), depending on where the bound morpheme -en attaches to the verb. If the bei-V sequence such as bei-piping ‘bei-criticize’ in the Mandarin short passive is a lexical complex, it is reasonable to assume that the sequence is derived either lexically or syntactically. I will show that neither of these options is possible. Under the syntactic approach (e.g., Baker (1988)), the bei-V sequence may be derived by adjoining the head of VP governed by bei to bei by X0 movement, as required by certain morphological considerations. The syntactic incorporation approach, however, is not supported by the word order facts with respect to adverbial elements modifying the “passivized” verb. Following Tang (1990) and Bowers (1993), we assume that manner adverbials are adjoined to VP. Given the incorporation analysis, it is then expected that when the verb is modified by manner adverbs in the short passive, the former should be followed by the latter after the X0 movement takes place, as illustrated in (40). This prediction is contrary to fact, as shown by the ill-formed (41), thus indicating that the bei-V sequence cannot be derived by Baker-type incorporation.

(40)

```
IP
  \[\ldots\]
  VP
  bei-piping
  ‘BEI-criticize’
  henhende ‘severely’
  \[\text{t} \]
  \[\text{VP} \]
```

(41) * Zhangsan bei piping-le henhende.
    Zhangsan BEI criticize-ASP severely
    ‘Zhangsan was severely criticized.’

Alternatively, under the lexical approach, the bei-V sequence may be formed in the lexicon and then fed into syntax as a whole. The lexical approach along this line is adopted by Reynolds (1995) for those bei-V sequences involving a bound verbal morpheme such as in (42).

(42) bei bu ‘to be arrested’
    bei fu ‘to be captured.’
    bei qie ‘to be stolen’
    bei dongs ‘to be passive’
    bei hai ‘to be killed’
    bei po ‘to be forced to . . .’

I will argue that while the lexical approach is correct for those sequences involving a bound verbal morpheme, it is incorrect for those involving a free verbal morpheme. A crucial contrast between them is that the bei-V sequence with a free verbal morpheme allows intervention between bei and the verb (43a) whereas that with a bound verbal morpheme does not (43b).

(43) a. Zhangsan bei mimi daibu-le
    Zhangsan BEI secretly arrest-ASP
    ‘Zhangsan was arrested secretly.’

b.* Zhangsan bei mimi bu-le.
    Zhangsan BEI secretly arrest-ASP
    ‘Zhangsan was arrested secretly.’
The ill-formedness of (43b) supports the analysis that the bei-bu ‘BEI-arrest’ sequence is a lexical compound. In general lexical operations feed syntactic ones. Thus, V-V compounds which are argued to be derived in the lexicon by Y. Li ((1990a) and subsequent works) cannot contain a manner adverb modifying the second component of the compound, as evidenced by the ill-formed (44).

(44) *Zhangsan da-yianzhongde-shang-le Lisi.  
Zhangsan hit-seriously-wounded-ASP Lisi  
‘Zhangsan hit Lisi and as a result Lisi was seriously wounded.’

The verb bu ‘arrest’ in (43b) is modified by the manner adverbial mimi ‘secretly’. If bei-bu is analyzed as a lexical compound, the ill-formedness of (43b) can be treated on a par with that of (44).

Given this line of reasoning, the sequence bei-daibu is highly unlikely to be derived in the lexicon since it allows the adverbial mimi ‘secretly’ to occur between the two elements in (43a). If the bei-daibu sequence were a lexical compound like bei-bu ‘bei-arrest’, (43a) would be impossible, contrary to fact. In contrast, the well-formedness of (43a) follows from the claim that bei selects a VP in the short passive. Under this analysis, the intervening adverb mimi ‘secretely’ between bei and the “passivized” verb is actually adjoined to the VP headed by the verb daibu ‘arrest’, as illustrated in (45). This naturally explains why a productive bei-V sequence can be separated by adverbial elements.20

(45)

\[
\begin{array}{c}
\text{IP} \\
\ldots \\
\text{VP} \\
\text{bei} \\
\text{mimi} \\
\text{‘secretely’} \\
\text{VP} \\
\ldots \text{daibu} \ldots \\
\end{array}
\]

In brief, the lexical passives such as those in (42) noted by Reynolds (1995) have a bound verbal morpheme attaching to bei. Since this bound verbal morpheme always comes from classical Chinese,21 these lexical passives are limited in number. The unproductivity of the lexical passives, in turn, lends further support to our A-movement analysis of the separable short passives, whose formation is entirely productive.

The question that arises now is in what structure this A-movement takes place. CHLT (1993) argues that it is on a par with the get-passive in English and that the subject of bei is base-generated. Ting (1995), on the other hand, claims that the subject of the short passive in Mandarin Chinese is derived by A-movement in a similar fashion to that generally assumed for English be-passives since Chomsky (1981). I will adopt CHLT’s analysis in this article.

The argument provided by CHLT is based on the fact that be-passives in English cannot take an agent-oriented adverb whereas get-passives can. As shown in (46), the subject position of be-passive in English is completely non-thematic and cannot take an agent-oriented adverb, in contrast to get-passives in English.

(46) a. *John was hit intentionally.  
b. John got hit intentionally.

The short passive in Mandarin may occur with an agent-oriented adverb (47). In this respect, it behaves like the get-passives, but not the be-passives, in English.

(47) Zhangsan guyi bei da-le  
Zhangsan intentionally BEI hit-ASP  
‘Zhangsan got hit intentionally.’

As further support, note that the short passive also behaves like the get-passive but not the be-passive, in that both of them do not allow a “passivized” stative verb, in contrast to the be-passives. The contrast is illustrated in (48).22

(48) a. John was loved.  
b.*John got loved.  
c. *Zhangsan bei ai-le.  
Zhangsan BEI love-ASP  
‘Zhangsan was loved.’

In addition to the empirical problems that arise from treating the short passive in Mandarin on a par with the be-passive in English, there are theoretical problems as well.23 Under Ting’s (1995) analysis, while bei is a two-place predicate in the long passive, it is a one-place predicate in the short passive. It takes a VP as complement but does not take an external argument, as in (49). Assuming the system of Case assignment in Y. Li (1990b), the verb governed by bei does not assign Case to its complement NP, and thus the NP moves to the matrix subject position.
(49) [Zhangsan, bei [vp da-le t1]]  
Zhangsan BEI hit-ASP

This analysis is theoretically problematic in that it has to stipulate that *bei* assigns an external theta-role in the long passive but not in the short passive. In contrast, under CHLT’s analysis, the short passive in Mandarin has the structure in (50).

(50) [Zhangsan, bei [vp PRO piping-le t1]]  
Zhangsan BEI criticize-ASP

‘Zhangsan was criticized.’

According to them, *bei* selects VP as complement. ‘... The head of VP, in virtue of the [passive] feature, does not have an external argument and cannot assign Case to its object. The object of *da-le* ‘hit-ASP’ hence NP-moves to [Spec, VP], where it is controlled by the subject of *bei*. According to this analysis, the verb *bei* is a two-place predicate, assigning an external theta-role of its own. This analysis is free from the problem that arises under (49). I will thus adopt CHLT for the analysis of the (syntactic) short passive.25

4.3. The Structure of the Long Passive

In this section, I argue that the long passive has *bei* selecting an IP, and it is either derived from *A*-movement or by *A*-binding, as given in (51).

(51) a. [Zhangsan, bei [ip Op1 [ip Lisi piping-le t1]] Z
Zhangsan BEI Lisi criticize-ASP

‘Zhangsan was criticized by Lisi.’

b. [Zhangsan, bei [ip Op1 [ip Lisi piping-le ta1 yidun]] Z
Zhangsan BEI Lisi criticize-ASP he once

‘Zhangsan was criticized once by Lisi.’

First of all, consider the constituency of *bei* and the post-*bei* NP. In the proposed structures in (51), *bei* selects an infinite IP clause as internal argument and an NP as external argument. That is, *bei* does not form a constituent with the post-*bei* NP, as assumed by analyses treating *bei* as a preposition. This is supported by evidence provided by CHLT (1993) from coordination that the post-*bei* NP forms a constituent with the following VP:

(52) Ta bei Lisi ma-le liang sheng, Wangwu ti-le he BEI Lisi scold-ASP two sound Wangwu kick-ASP
san xia.
three time

‘He was scolded two times by Lisi and kicked three times by Wangwu.’

The post-*bei* NP is actually a subject. This is shown by CHLT (1993) in (53) (cf. (35)).

(53) Zhangsan, bei Lisi zai ziji de jia Zhangsan BEI Lisi imprison at self DE home li.
inside

‘Zhangsan was imprisoned at his home.’

It is well known that the reflexive ziji ‘self’ in Mandarin Chinese only picks up a subject NP as antecedent (see Cole et al. (1990), among others). Assuming that *bei* is a verb, the fact that the post-*bei* NP Lisi may antecedede ziji ‘self’ in (53) indicates that it is the subject of the complement clause taken by *bei*. In theory, there are two possibilities for the clause type of the complement clause: finite or infinitive. I will argue that it is an infinitive and that *bei* is an ECM-type of verb which assigns Case to the embedded subject, namely the post-*bei* NP. The argument comes from the ill-formedness of examples like (54).

(54) *Zhangsan bei [zuotian wo piping-le yidun] Zhangsan BEI yesterday I criticize-ASP once

‘Zhangsan was criticized by me once.’

If *bei* takes a finite complement clause with the post-*bei* NP sitting in the subject position, then it is not clear why he temporal adverbial *zuotian* ‘yesterday’ in (54) cannot be adjoined to this complement clause. The ill-formedness of (54), on the other hand, is reminiscent of violation of the adjacency condition discussed in Stowell (1981) and suggests that *bei* and the following NP has a Case assignor-assignee relation. If we assume that *bei* is an ECM-type of verb assigning Case to the subject NP of its complement clause, the ill-formedness of (54) is readily explained on a par with that of (55).26

(55) *[John believes [ip obviously [ip Mary to be smart]]]
Let us now turn to the issue with respect to the null operator involved in the long passive. The discussion in section 3 leads us to the conclusion that the complement clause of bei contains a null operator. I will assume for the time being that it is adjoined to the complement clause of bei. Following Browning (1987) (cf. Chomsky (1980)), the null operator functions as a syntactic equivalent of a lambda operator and turns the clause minimally containing the null operator into a predicate. According to Browning, the null operator is a pro and takes the closest c-commanding argument NP as its antecedent. In order for the null operator to be properly identified with the subject NP of the bei clause, they must be close enough to each other, and thus the most plausible landing site for the null operator is adjunction to the complement. 37

The proposed structures of the long passive in (51) capture the conclusion reached in section 3 that the gapped long passive involves null operator movement (51a) whereas the non-gapped passive involves null operator binding (51b). This analysis also correctly accounts for the facts that the long passive must contain an element co-indexed with the grammatical subject preceded by bei and that this element must be either a gap or an overt pronoun. Consider the examples in (56).

(56) a.*Zhangsan bei liumang da-le Wangwu.
    Zhangsan BEI hoodlum hit-ASP Wangwu
    ‘Zhangsan was affected by the hoodlum’s hitting Wangwu.’

b.*Zhangsan bei wawa ku-le.
    Zhangsan BEI baby cry-ASP
    ‘Zhangsan was affected by the baby’s crying.’

c.*Zhangsan, bei Lisi piping-le zijii.
    Zhangsan BEI Lisi criticize-ASP self
    ‘Zhangsan was criticized by Lisi.’

In (56a), the gap at issue is occupied by a lexical element Wangwu. In (56b), the “passivized” verb is an intransitive. In both instances, there is no element co-indexed with the subject preceded by bei, hence the ill-formedness. In (56c), despite the fact that there is an anaphor zijii ‘self’ fulfilling the co-indexation requirement, the example remains ill-formed, 38 suggesting that the co-indexed element can only be an empty category or an overt pronoun as in (51a, b). 39,40

The ill-formedness of the examples in (56) follows from the proposed A’-dependency analysis. Under this analysis, the long passive must contain an element co-indexed with the subject preceded by bei because it involves either null operator movement or null operator binding in the complement clause. This, at the same time, explains why the co-indexed element must be either an empty category or an overt pronoun but not an anaphor. As shown by the contrast in (57), a null operator can bind an overt pronoun but not an anaphor.

(57) a.*Zhe jiushi [Zhangsan jiao-guo ta liang nian de Op.]
    this is Zhangsan teach-ASP he two year DE
    nage renii
    that person
    ‘This is the person that Zhangsan taught him for two years.’

b.*Zhe jiushi [Zhangsan jiao-guo zijii liang nian de Op.]
    this is Zhangsan teach-ASP self two year DE
    nage renii
    that person
    ‘This is the person that Zhangsan taught him for two years.’

Before ending this section, note that while both Feng (1990) and CHLT (1993) treat the bei-construction on a par with the tough-construction in English because both involve a null operator in the complement clause, the parallelism should, more precisely, be made between the bei-construction and the so-called Complement Object Deletion (COD) construction such as in (58).

(58) The book is too long [Op. [PRO to read [c.]]].

It is generally assumed (Browning (1987), Cinque (1990), among others) that the COD construction also involves a null operator in the complement clause. There are two pieces of evidence showing that the bei-construction is more similar to the COD construction than to the tough-construction. The first support comes from the theta-role assignment of the matrix predicate. In both the long passive in Chinese and the COD construction in English, the matrix subject gets the external theta-role from the matrix predicate. The matrix subject in the tough-construction (10), in contrast, does not (see Chomsky (1981)). Additional support for treating the long passive in Mandarin on a par with the COD construction, rather than the tough-construction in English, comes from the fact that both the long passive in Chinese and the COD construction in English allows the null operator to bind an overt pronoun, but the tough-construction does not. 31

Consider the contrast in (59).

(59) a. The book is too long for us to read it in a night.
b. *The book is tough for us to read it in a night.
Given these considerations on theta-role assignment and the possible occurrence of an overt pronoun in the gap, the Chinese long passive behaves more like the COD construction than the tough-construction.

NOTES

* Essentially the same distinction between the structures of the bei-sentences with and without the lexical logical subject has been independently argued for by Cheng, Huang, A. Li and Tang (1993) though some details are not clear from their short manuscript. I'd like to express my greatest gratitude to my thesis advisor Yoshiiisa Kitagawa for ushering me to the issue of passivization and for the discussion of as well as suggestion on various points presented in this article. I'd also like to thank Greg Carlson and Ayumi Ueyama for helpful discussion and comments. I am also indebted to three anonymous JIEL reviewers whose thoughtful and careful comments are extremely helpful and have resulted in a much improved version. In addition, I have also benefited from the comments of the audiences of the 8th North America Conference on Chinese Linguistics at the University of Illinois and the 5th International Conference on Chinese Linguistics at the National Tsing-Hua University, Taiwan, including those of Lisa Cheng, Andrew Li, Ding-xu Shi, Kuo-Ming Song, C.-C. Jane Tang, and Ting-Chi Tang. I would also like to thank Jim Huang for his interest in this work and for his valuable comments. Lastly, my thanks go to Yafei Li for his support, comments, and suggestions on various versions of this article. Errors are obviously my own.

1 This article focuses on passive sentences marked by bei. Those, like (i), that convey a passive sense but do not contain an overt passive marker are discussed in Ting (1997).

(i) Yu chi-diao-le.
   fish eat-up-ASP
   'Fish were all eaten up.'

2 The term "logical subject" is used here to refer to the semantic subject, usually an agent. The term "grammatical subject", on the other hand, is a structural concept, referring to the constituent in the [Spec/VP] or [Spec/CP] position in the sense of Kitagawa (1986) and Koopman and Sproat (1987).

3 One anonymous reviewer disagrees with using this type of marginal bei-sentences as evidence because ". . . many cases, . . . ungrammatical sentences might become marginal if some other factors play a role." It appears that the reviewer thinks that the length of this type of bei-sentences is the decisive factor since he/she cites the judgment of the following two sentences as support:

(i) ??Zhangsan zai-da-tiung-guang-zhong-zhi-xia bei hao-bu-liu-qiing-de
   Zhangsan in-public BEI ruthlessly
   yian-ci-piping-le ta yidun
   severely-criticize-ASP he once
   'Zhangsan was ruthlessly and severely criticized in public once.'

(ii) ??Zhangsan bei wo piping ta.
   Zhangsan BEI I criticize he
   'Zhangsan was criticized by me.'

This observation may not be accurate. First, it is not the length of the sentence that determines that (i) is better than (ii). Rather, the licensing condition for the non-gapped passive in Mandarin is that the post-verbal pronoun must be followed by some element, usually an adverbial. Thus, the lack of the adverbial yidun 'once' following the pronoun ta 'he' in (i) would make the sentence as bad as (ii), as illustrated in (iii).

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(iii) ??Zhangsan zai-da-tiung-guang-zhong-zhi-xia bei hao-bu-lieu-qiing-de
   Zhangsan in-public BEI ruthlessly
   yian-ci-piping-le ta
   severely-criticize-ASP he
   'Zhangsan was ruthlessly and severely criticized in public.'

Furthermore, with respect to using marginal examples as evidence, my point of view is that as long as the awkwardness of them can be explained, there is no reason to reject them as constituting a valid argument. The insight of the A'-dependency approach to the bei-construction is that the post-verbal pronoun in the non-gapped passive is licensed on a par with that in the relative clause, the parallelism can be shown in two respects: (i) On the one hand, both the non-gapped passive and the relative clause with an overt pronoun in place of the gap require an adverbial following the post-verbal pronoun. Consider the non-gapped passive (ii) and the relative clause (iv).

(iv) ?Zhe jiushi [wo jiao-guo ta ??(san nian) de] nage ren
   this is I teach-ASP he *three year DE that person
   'Kill this guy.'

The grammaticality of such sentences, however, appears quite suspicious if we consider more examples in (ii).

(ii) a. *Wo ba Zhangsan piping-le ta yidun
    I BA Zhangsan criticize-ASP he once
    I criticized Zhangsan once.'

b. *Wo ba Lisi da-le ta yixia.
   I BA Lisi hit-ASP he once
   'I hit Lisi once.'

I will thus continue to believe that there is no independent evidence that an A-trace may alternate with an overt pronoun in Mandarin Chinese. Furthermore, it hasn't been attested cross-linguistically that an NP-trace can alternate with an overt pronoun, in contrast to an A'-trace. We may treat this fact as resulting from the interaction of some principles in UG. The actual mechanism, however, is not clear. As discussed in Ting (1995), neither the binding conditions nor Case theory offers an account. Under Baker et al.'s (1989) analysis, an English passive sentence has a bia-clausal structure, in which the passive morpheme -en is an argument sitting under INFL in the embedded clause taken by the auxiliary be. The pronoun in the complement position of the passive verb in this structure is free in its governing category, namely, the embedded clause, thus satisfying the binding condition B. Case theory, on the other hand, does not straightforwardly rule out the impossible occurrence of the pronoun either. Yafei Li (p.c.) points out that the pronoun at issue can be argued to receive Case through Case transfer. It is a mechanism assumed by Chomsky (1986b) for an argument in an expletive-argument pair to get Case. The expletive-argument pair is similar to an A-chain in that the initial member of the pair is in a Case position, and the final member of the pair
is in a theta-position. Both instances are labeled as CHAINs, in which Case is transferred from the head position to the terminal position. Given the mechanism of Case transfer, the pronoun at issue can receive Case transferred from the co-indexed NP in the nominative Case position because this co-indexed pair has the initial member in a Case position, and the final member in the theta-position, counting as a CHAIN in the sense of Chomsky (1986b). In brief, we have seen that neither binding theory nor Case theory accounts for the generalization stated in (iii). For the purpose of the argumentation pursued here, we will take (iii) at its face value. The explanation of it will be left for future studies.

(iii) (In contrast to an A*-trace), an NP-trace does not alternate with an overt pronominal.

Another anonymous reviewer points out that Chinese may pose a problem for (iii), given the instances of subject-to-subject raising in (iv):

(iv) a. Zhangsan, Kan gen EC zhe ci bu qu. Zhangsan probably this time not go 'Zhangsan probably will not go this time.'

b. Zhangsan, Kan gen zhe ci ta, bu qu. Zhangsan probably this time he not go 'Zhangsan probably will not go this time.'

It is not clear to me that the sentence-initial NP *Zhangsan* in (ivb) is in the subject position. It is possible that the NP *Zhangsan* is in the topic position controlling a pro in the subject position. Unless there is evidence showing that the NP *Zhangsan* is a subject in (ivb), we don't want to say that Chinese is different from other languages with respect to the generalization in (iii).

The resumptive pronoun strategy is used as a last resort in English but not in Chinese (cf. Li and Thompson (1981)).

The location of the A*-operator, whose presence is to be argued for, is left unspecified for the moment, but it must be close enough to the subject preceding *bei* to get identified by it.

The A*-dependency analysis proposed here for the long passive is different from the previous ones. Under Feng's analysis, the non-gapped passive does not contain a null operator. Thus, it is forced to stipulate that only a gap or a pronoun co-indexed with the NP preceded by *bei* may occur in the complement position of the "passivized" verb. Under Chui's (1993) and Ting's (1993) analysis, the empty category in the gapped long passive is an A*-bound pro rather than a variable. As argued by Ting (1995), their analyses fail to explain island effects exhibited in the *bei*-construction.

One anonymous reviewer has questions about using the facts of non-local passivization observed by Feng (1990) and Y. Li (1991a) in support of the A*-dependency analysis of the long passive. The reviewer first questions the validity of the structures assigned to the non-local passives, such as those in (8b), (21b), and (23b), saying that "the structure is adopted without any justification. This is not the only possibility and perhaps not the best representation..." In this connection, the reviewer points out six sentences which he/she claims "fit the general pattern of pivot construction" like the non-local passives discussed in this article but "are not likely to have the structure" posited in the text. The examples which are the most relevant to our discussion are quoted below:

(i) Ta shouxia de jibu bei hua gui bieren he under-control DE old-subordinate BEI assign to others zhuhui command 'His old subordinates were assigned to be in the command of others.'

DERIVING THE BEI-CONSTRUCTION

(ii) Lian guniang de kunbao ye bei na dao hua-le ge Lian young-lady DE purse also BEI take knife cut-ASP GE kouzi hole 'Someone also cut a hole on Miss Lian's purse with a knife.'

(iii) Chungcheng zhongyu bei Lui ji gian ding ji buhuan. Chungcheng finally BEI Lui general make strategy catch 'Chungcheng was finally caught by General Liu who made a strategy.'

Based on examples in (i) and (ii), the reviewer further claims that they pose problems for the proposal made in the text because these non-local passives do not have a lexical logical subject after *bei*.

Some clarification is necessary here. First, as mentioned in the text, the structure of sentences with an object control verb is adopted under the general assumption in the principles-and-parameters framework. What is crucial to our discussion is that they must be bi-clausal, and the embedded clause is a binding domain itself. This is supported by the binding facts:

(iv) Zhangsan, pai wo piping ta,1/2 Zhangsan send I criticize he 'Zhangsan sent me to criticize him,2.'

As shown in (iv), the object pronoun ta 'he' can refer to the subject NP Zhangsan, indicating that the former must be in a different binding domain from the latter; otherwise, the Binding Condition B would be violated. Whatever structure captures the bi-clausal nature of sentences of object control verbs will be fine with me. Furthermore, I did not claim that all serial verb constructions or pivotal constructions have a structure like that in (8b). The reviewer is correct that examples such as (i)-(iii) are not likely to have that structure. Consider (i) first. Note that it does not have an active counterpart. In this respect, it definitely behaves differently from the non-local passive containing an object control verb in (8a). It may involve a complex verb like those in the retained object construction. With respect to the other two examples, they both involve a configuration of the serial verb constructions and fit one of the descriptions given by Li and Thompson (1981), i.e., two or more separate events, the structures of serial verb constructions are controversial (see Y. Li (1991b) and references cited there) and I don't want to pursue the issue here. It is possible that V1 and V2 may form a verbal complex. In any case, it is not clear that these examples are real counterexamples to the analysis based on the non-local passives containing an object control verb.

One anonymous reviewer notes that the word passive in (i) allows *suo* in the absence of the lexical logical subject.

(i) Ta bu wei suo diong, jixu gong-zhe shen wang qian he not WEI SUO affect continue arch-ASP body toward front shang, up 'He was not affected and continue to move up with his body arched.'

This fact does not pose a problem for the proposed analysis that the *bei*-passive without a lexical logical subject does not license the presence of *suo*. *Bei*-passives, in contrast to *wei*-passives, do not co-occur with *suo* in the absence of the lexical subject in modern Chinese. Another anonymous reviewer, however, points out that there are such instances in classical Chinese as in San Guo Yan Yi, exemplified in (ii).
Thus, the presence of the aspect marker -le in the clause cannot be used as evidence against it being an infinitive clause.

Jim Huang (p.c.) points out that although -le is phonologically attached to the lower predicate in the infinitive clause, its semantic scope reaches the entire matrix predicate. Thus, negation of (i) is (iii).

(iii) Wo mei qing-gu Zhangsan chi fan.
I not invite-ASP Zhangsan eat rice
'I haven’t invited Zhangsan to eat.'

Note that negation of a bei-sentence parallels negation of clauses with a complement infinitive clause. Thus, negation of (iv) is (v) rather than (vi). This further supports the analysis of the complement clause in the long passive as an infinitive.

(iv) Zhangsan bei Lisi piping-le yidun.
Zhangsan BEI Lisi criticize-ASP once
'Zhangsan was criticized by Lisi.'

(v) Zhangsan bei Lisi piping yidun.
Zhangsan not BEI Lisi criticize once
'Zhangsan was not criticized by Lisi.'

(vi) *Zhangsan bei Lisi mei piping yidun.
Zhangsan BEI Lisi not criticize once
'Zhangsan was not criticized by Lisi.'

If both the long passive and relative clauses in Mandarin Chinese involve null operator movement, why does the tensedness effect discussed in the text arise only in the former but not in the latter? There is evidence suggesting that this contrast is due to the different nature of the null operator involved in these constructions: while the null operator in the Mandarin long passive behaves on a par with the one in tough-constructions in English, the one in relative clauses is on a par with the wh-operator in wh-questions in English. As observed by Lassnik and Stowell (1991), both relative clauses and wh-questions in English show weak crossover effects, but the tough-construction does not. This contrast indicates that the null operator in relative clauses behaves like the wh-operator in English wh-questions but not like the null operator in tough-constructions. Under their analysis, this is because the null operator in the tough-construction is a [-wh] quantifier whereas the operator in the relative clauses and the wh-questions in English are [+wh] quantifiers, which have real quantificational force.

Li et al. (1980) argues that bei is a preposition in the long passive but becomes a (helping) particle in the short passive. This analysis is followed and modified by Shi (1997).

This argument, however, cannot be used against treating bei like -en in the bei-V sequence such as bei-bei ‘BEI-arrest’. This type of bei-V string is argued to be formed in the lexicon and cannot be separated by adverbal elements, to be shown in section 4.2. To give a unified treatment of the categorical status of bei, I will assume that it is a verb, rather than a passive affix, in this type of short passive.

Under the proposed analysis, the post-verbal pronoun ta ‘he’ in the bei-passives is bound by a null operator. As a pronoun, it is subject to the Binding Condition B. On the other hand, since it is bound by an operator, its interpretation is a variable. See Demirdache (1991) and the references cited there for discussion.

If bei is analyzed as a verb rather than a preposition, then the attachment of the bound verbal morpheme to bei in the lexical passive also follows naturally since compounds in Mandarin Chinese can be formed by V-V but not P-V.

It is not clear why bei has such selectional properties, which result in the different syntactic behavior in the long and the short passives. This may not be a serious problem, however.
given that there are verbs such as *seem, which also have more than one subcategorized frame. *Seem takes either an infinitive clause containing a lexical subject or a tensed clause as complement. There does not seem to be a satisfactory explanation as to why the infinitive complement clause cannot be one containing a PRO subject. The analysis of *bei taking a VP in the short passive might raise a question; that is, it is not clear why a PP cannot adjoin to this complement VP, given the ill-formedness of (i).

(i) a. *Zhangsan bei zai gongsi li piping-le.
   Zhangsan BEI at company inside criticize-ASP
   ‘Zhangsan was criticized in the company.’
   
   b. *Yianshi bei zai kongqi zhong qingshi-le.
      rock BEI at air middle erode-ASP
      ‘Rocks were eroded in the air.’

   The ill-formedness of sentences in (i) might not be due to syntactic factors. The ill-formedness of (i) is lessened if an adverb separates *bei and the PPs, as illustrated in (ii).

(ii) a. *Zhangsan bei mimi zai gongsi li piping-le.
      Zhangsan BEI secretly at company inside criticize-ASP
      ‘Zhangsan was secretly criticized in the company.’
      
   b. *Yianshi bei manmante zai kongqi zhong qingshi-le.
      rock BEI slowly at air middle erode-ASP
      ‘Rocks were slowly eroded in the air.’

   A PF proposed by Ting (1995) to account for this fact is given in (iii), which states that the bei-PP sequence is ill-formed when the PP is headed by zai.

(iii) *[bei PP] where PP is headed by zai.

   The plausibility of a PF filter like (iii) can be supported by the fact that there are certain prepositions that can go with bei, illustrated by (18c) and (iv).

(iv) Neixie fulu bei yi yizhong cankude fangshi lingnue-zhe.
    those POW BEI with one cruel way torture-ASP
    ‘Those POWs were being cruelly tortured.’

Thanks to one of the anonymous reviewers for pointing this out to me. An anonymous reviewer points out that replacing the verb ai with tengai ‘love, pamper’ in the example (48) produces a grammatical sentence, thus suggesting that it may not be the static status of verbs in the bei-construction that is at issue. According to Li and Thompson (1981), verbs that are found with bei signal disposal, shown by the ill-formedness of the following examples.

(i) *Lisi bei ta hen-le.
    Lisi BEI he hate-ASP
    ‘Lisi was hated by him.’

(ii) *Ta bei wo taoyan-le.
    he BEI I be-sick-of-ASP
    ‘I was sick of him.’

If the parallelism between the short passives of the bei sentences in Mandarin Chinese and the get-passives in English discussed in the text is on the right track, it may be the case that the ill-formedness of the get-passive in (48b) also has to do with the notion “disposal.”

23 Thanks to Yafei Li, Ting-Chi Tang, and an anonymous reviewer for pointing this out to me.
24 The embedded empty subject in the short passive in the configuration (50) is not bound by the matrix subject. Its reference is arbitrary or determined by pragmatic considerations (cf. the generalized control rule given in note 30 (ii)). This property of empty subjects is illustrated in the following examples taken from Huang (1989).

(i) It is unclear what PRO to do.
(ii) [PRO xiyan] you hai.
     smoke have harm
     Smoking is harmful.

25 One might wonder whether the A-movement analysis of the short passive in Mandarin can handle the so-called ‘retained object’ construction in (i) because the NP yiitao tui ‘one leg’ gets Case from the verb da-duan ‘break’.

(i) Neizhang zhouzi bei da-duan-le yiitao tui.
    that BEI hit-break-ASP one leg
    ‘One of the table’s legs was broken.’

This type of sentence, however, may not be a problem for the A-movement analysis of the bei-construction if we adopt Thompson’s (1973) analysis of the ‘retained object’ construction. That is, the retained object is an ‘inner object’ and gets Case from the preceding verb. The ‘inner object’ and the verb it gets Case from, in turn form a complex verb to assign Case to an ‘outer object’. Thus, under this analysis, A-movement can still be motivated when this complex verb does not assign Case.

26 The embedded infinitive IP in the long passive does not appear to license an IP-level adverbial such as zuotian ‘yesterday’, thus casting doubt on the proposed analysis, as pointed out by a reviewer.

(i) *Zhangsan bei [Lisi zuotian piping-le yidon]
    Zhangsan BEI Lisi yesterday criticize-ASP once
    ‘Zhangsan was criticized by Lisi once yesterday.’

The ill-formedness of (i) may not pose a problem for our analysis, however. It may be greatly improved if we add some other element in the embedded clause, such as location adverbials and manner adverbs, illustrated in (ii).

(ii) Zhangsan bei [Lisi zuotian zai bangongshi henhende piping-le]
    Zhangsan BEI Lisi yesterday at office severely criticize-ASP yidon
    once
    ‘Zhangsan was severely criticized by Lisi once in the office yesterday.’

The acceptability of (ii) shows that the embedded clause in the long passive indeed licenses an IP-level adverbial. Example (i) is probably out for some different reason.

27 As for why the null operator does not block the accusative Case assignment of the infinitive subject NP, my speculation is that the adjacency condition does not apply when the intervening element is non-overt. As pointed out by Yoshi Kitagawa (p.c.), this is actually consistent with Baker’s (1988) suggestion that abstract Case relations must be expressed at PF.
28 For speakers who accept the non-gapped passives with a resumptive pronoun ta ‘he’, the grammaticality contrast is clear if ta is changed to ziji ‘self’.
29 The examples in (56a, b) should not be ruled out by the claim that the intended meaning
cannot be expressed by passive sentences since the Japanese passive counterparts of them in (i) are well-formed (see Kitagawa and Kuroda (1992)).

(i) a. Yamadasan-ga kuro-ni Takasi-o nagar-are-ta.
   Yamadasan-nom hoodlum-by Takasi-acc hit-PASS-PAST
   'Yamada was affected by the hoodlum’s hitting Takasi.'

   b. Yamadasan-ga akanbo-ni nak-are-ta.
   Yamadasan-nom baby-by cry-PASS-PAST
   'Yamada was affected by the baby's crying.'

Given the structures of the long passive in (51a, b), however, it is not immediately clear why the embedded subject cannot be an empty pronoun as in (ia, b).

(i) a. [Zhangsan, bei [\( \alpha \) Op, \( \tau \) pro piping-le \( \tau \)]]
   Zhangsan BEI criticize-ASP
   'Zhangsan was criticized by someone.'

   b. [Zhangsan, bei [\( \alpha \) Op, \( \tau \) pro piping-le \( \tau \), yidun]]
   Zhangsan BEI criticize-ASP he once
   'Zhangsan was criticized once by someone.'

If the embedded subject can be an empty pronoun, then the output of this structure would be a short passive. This means that the long passive and the short passive can both involve a null operator, and we would lose our account of the contrasts of these two types of passive. Thus it must be the case that structures like (i) are not possible. I assume that they are ruled out independently as follows. If the embedded subject is a pro, then it would cause a clash between the Binding Condition B and the generalized control rule, as formulated by Huang (1990, ch. 5, p. 45) in (ii). (For a somewhat different formulation of the rule, see Huang (1989, p. 193).)

(ii) The Generalized Control Rule (GCR)
   An empty pronoun (PRO or pro) is co-indexed with the closest potential antecedent. (Otherwise, an empty pronoun is assigned the index orb for arbitrary reference.)

By the generalized control rule, the empty subject must be co-indexed with the matrix subject. By the Binding Condition B, on the other hand, it must not be bound in its governing category. The governing category is the matrix clause, which contains its governor, namely bei and an accessible subject (Chomsky (1986b)). Given that the empty subject cannot be subject to the generalized control rule and the Binding Condition B at the same time, the structure is ungrammatical (cf. Huang (1984)).

The proposed analysis still has not explained why the logical object pronounal in the bei-sentence needs to be followed by some constituent, illustrated by the contrast in (i). I will leave it for future studies.

(i) a. *Zhangsan bei wo piping-le ta.
   Zhangsan BEI I criticize-ASP he
   'Zhangsan was criticized by me.'

   b. ?Zhangsan bei wo piping-le ta yidun.
   Zhangsan BEI I criticize-ASP he once
   'Zhangsan was criticized by me once.'

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