This paper argues for a prosodic account of the origin of *bei* passives in Classical Chinese.\(^1\) It shows that the [*bei*-\(V\)] passives in Archaic Chinese (before 206 BC) were born as Prosodic Words (PrWds) and compounds motivated by the disyllabic foot formation. When disyllabic verbs developed in the Eastern Han dynasty (25-221 AD), [*bei VV\]] forms began to appear. The prosodic system, however, does not allow a \([\sigma-\sigma\sigma]\) verb-complement structure to be PrWd and compound. The [*bei VV\]] forms were thus analyzed as phrases, giving rise to the [*bei [VP]\]] and [*bei [NP V]\]] structures. It concludes that prosody not only motivates but also advances and further constrains syntactic structures in natural languages.

1. Introduction

The passive *bei* sentences in Modern Chinese have recently been divided into two types of constructions (Huang 1997, Ting 1995), namely, a long passive (with an agent NP) as shown in (1a) and a short passive (without the agent NP) as seen in (1b).\(^2\)

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\(^1\) The term Classical Chinese is used here as a cover term referring to the literary language in Archaic and Ancient Chinese. Archaic Chinese refers to the language used before the Qin Dynasty (220-206 BC), and Ancient Chinese refers to the language from the Han Dynasty (206 BC-220 AD) to the Tang Dynasty (618-907 AD).

\(^2\) The following abbreviations are used in the glosses: ADV - adverb; PRT - particle; ASP - aspect; PROG - Progressive.
(1) a. Zhangsan bei ren pian le.
   Zhangsan bei person cheat ASP
   'Zhangsan was cheated by someone.'

   b. Zhangsan bei pian le.
   Zhangsan bei cheat ASP
   'Zhangsan was cheated.'

It has been argued that the long passives are derived by a syntactic operation involving a null operator movement (Feng 1990, Cheng, Huang, Li, and Tang, 1993; Chiu 1995, Ting 1995). The short passives are structured by an A-movement (Li 1990, Ting 1995, Huang 1997). Given the two types of Modern passives, diachronic questions arise. Why are two different passive sentences formed by one passive morpheme bei in Mandarin Chinese? How do they come about?

It is well known that the earliest passive bei sentences in Archaic Chinese were [bei V] short forms in which the agent NP was not allowed to appear between the bei and the V (Wang 1980:425, Peyraube 1996), as shown in (2):

(2) 萬乘之國被圍於趙. 《戰國策·齊策》 (Zhanguoce.Qice)
Wan sheng zhi guo bei wei yu Zhao.
ten.thousand chariot 's country bei surround by Zhao
'A state with ten thousand chariots was surrounded by Zhao.'

The [bei V] sentences look very much like the passive sentence in English in that the logical object occupies the subject position and the logical subject is introduced by a preposition. By the end of the Eastern Han Dynasty (25-220 AD), the logical subject was no longer introduced by a preposition but was instead inserted before the V, giving rise to the long passives, as seen in (3).

(3) 臣被尚書召問. 蔡邕〈被收時表〉 (Cai Yong: Beishou Shibiao)
Chen bei Shangshu zhao-wen.
l bei Minister call-ask
'I, the subject, was questioned by the Minister.'
The question then is: Why in the early form, must the agent NP be introduced by a preposition? How could it later come to appear between the bei and the verb? What is the mechanism of this change?

In this paper I will provide a prosodic-syntactic analysis for the origin of the short and long passive bei sentences in Classical Chinese. I will argue that the Archaic [bei-V] forms (before 220 BC) were PrWds or compounds motivated by the newly established disyllabic foot formation. After the Western Han, as various types of PrWds were idiomatized and lexicalized, there were more and more disyllabic compound verbs. As a result, what was once a monosyllabic verb used in the [bei-V] could be alternatively expressed by a disyllabic verb in the same environment: [bei [σσ]v] expressions begin to make an appearance in the language. Since the prosodic system does not allow [σ-σ] verb-complement structures to be PrWds and compounds, the new [bei [σσ]v] forms were therefore analyzed as phrases, hence, the new [bei [VP]] and [bei [NP VP]] structures were born.

This paper is organized as follows. Section 2 reviews previous analysis and provides background for the development of bei sentences. Section 3 argues that the [bei-V] forms in Archaic Chinese were prosodically motivated PrWds and compounds. Section 4 discusses the origins of the [bei [VP]] and the [bei [NP V]] structures, and section 5 is a summary of this study.

2. Background and Previous Studies

It has long been observed (Wang 1980; Zhang 1994) that bei was originally a verb meaning 'to get' or 'to receive' in Archaic Chinese, as exemplified in (4):

(4) a. (荆柯)被八傷。〈戰國策·燕策〉 (Zhanguoce.Qice)
   (Jing Ke) bei ba shang.
   Jing Ke receive eight wound
   'Jing Ke was wounded in eight places.'
b. 申生孝而被殃。《楚辭・七諫》 (Chuci. Qijian)
Shensheng xiao er bei yang
Shensheng filial. but get disaster.
'Shensheng was obedient, but he met with disaster.'

In the earlier part of the Warring States Period (475-221 BC), bei commonly appeared within a structure of [bei Modifier N], as seen in (5).

(5) a. 天下被其利。《墨子・尚賢》 (Mozi. Shangxian)
Tianxia bei qi li.
World receive its benefit
'The world benefitted from it.'

b. 身被三累。《韓非子》 (Hanfeizi.2.3.52)
shen bei san lei.
body receive three trouble
'You got into three troubles.'

About the same time or little later, more and more disyllabic bei sentences appeared in the language, that is, the bei took only a bare noun and the [bei N] could possibly be reinterpreted as a [bei V], as seen in (6).

(6) 被戮 bei lu got killed; got a death penalty
被辱 bei ru got insulted; got an insult
被侵 bei qin got invaded; got an invasion

In the later part of the Warring States Period (475-221 BC), the agent NP was introduced by a preposition yu, as in (7):

(7) a. 萬乘之國被圖於趙。《戰國策・齊策》 (Zhanguoce. Qice)
Wan sheng zhi guo bei wei yu Zhao.
ten.thousand chariot's country bei surround by Zhao
'A state with ten thousand chariots was surrounded by Zhao.'
b. 被服於成俗。《史記· 厲書》 (Shiji.Lishu)
   bei fu yu cheng-su.
   bei subdue by existing-custom
   '(people) were subdued by traditional customs.'

By the Han Dynasty (206 BC-25 AD), more and more trisyllabic bei forms had appeared in the language. For example (taken from Shiji (100 BC) and Lunheng (100 AD)):

(8) 被棺斂 bei guanlian 'was buried in a coffin'
    被殺謗 bei huibang 'was slandered'
    被累害 bei leihai 'was implicated'

Only starting from the Eastern Han (25-220 AD), could adverbs be used before the complement of the bei, indicating that the complement of bei became an independent VP. For example:

(9) a. 橫被暴誅。《呉越春秋· 闔閭內傳》 (ca. 50 A.D.)
    heng bei bao zhu.
    unexpectedly get violently kill
    'got violently killed for no reason.'
    (Wuyuechunqiu.Helyuneizhuan)

    b. 多被陰害《太平經· 樂怒吉凶誄》 (ca. 100 AD)
    duo bei yin hai
    frequently get conspiratorially harm
    'frequently got conspiratorially harmed.'
    (Taipingjing.Lenujixiongjue)

Only after the appearance of [bei_vP[Adv V]] (27-97 AD), was the long passive bei structure [bei_p[NP V]] born (132-192 AD), as seen in (3). In other words, the postverbal oblique argument (i.e., the Agent NP) in (2) became a preverbal core argument in (3).

Considering the development of bei sentences outlined above, Wang (1980) first pointed out that the evolution of passive bei sentences started by Late Warring State Period (475-221 BC), as seem in (2), and was completed after the Han (200 AD) as seen in (3). Even though Wang noticed that the complement of bei has changed its syntactic category from an NP in (4) to a VP in (9), he
does not explain how the complement of *bei* could change its syntactic category from a noun to a verb or what might be the mechanism of the change.

Bennett (1981) argues that since nouns in Classical Chinese can be used as a verb without any overt morphological changes, if the NP in [*bei NP*] is formed by a bare noun, then the N will be interpreted as a V. Hence, the [*bei NP*] changes into a [*bei V*], as seen in (6) above and (10) below.

(10) 今兄弟被侵…知友被辱。《韓非子·五蠹》
     (Hanfeizi.Wudu)
     Jin xiongdi bei qin... zhiyou bei ru...
     Now brothers get invasion... friend get insult.
     'Now brothers got invaded/invasions...friends got insulted/disgraces.'

In (6) & (10) *bei* with its complements can be analyzed as either a [*bei N*] or a [*bei V*]. What is important, Bennett (1981) argues, is that the ones that exhibit the property of being alternatively interpreted as either a [*bei N*] or a [*bei V*] are the ones formed only by the *bei* with an X° element. In other words, it is impossible for examples in (11) to have an alternative interpretation.

(11) (荆柯)被八傷。《戰國策·燕策》
     (Jing Ke) bei [ba shang]_{NP}.
     Jing Ke receive eight wound
     'Jing Ke receive eight wounds.'
     '*Jing Ke receive wounded eight times.'

The complement of *bei* in (11) is an NP, but not an N. The argument made by Bennett can be formally captured by a principle of category changing. Category changing is a change of lexical head (i.e., X°). The maximal projection could, and eventually will, change (from an NP to a VP, for example) if and only if the head X° changes first (from an N to a V, for example). This is to say that an XP cannot change first into a YP with the YP then forcing the head to change from X to Y. Theoretically, an XP is projected by its head; hence, the syntactic category XP is determined by its head X°, rather than the other way around. Given Bennett’s argument and the
Category Changing Principle, the \([bei\ NP]\) forms in (11) can never be reanalyzed as \([bei\ VP]\) directly. It follows that the actual change from examples in (4) to examples in (9) must have taken the following pathway:

\[
\begin{align*}
(12) \quad [bei\ NP] & \rightarrow [bei\ N/V] \rightarrow [bei\ VP] \\
\text{Stage-1} & \quad \text{Stage-2} & \quad \text{Stage-3}
\end{align*}
\]

Stage-2 is necessary for the transition from Stage-1 (i.e., (4)) to Stage-3 (i.e. (9)), because it is an N, rather than an NP, that functions as either a noun or a verb in the environment where the change takes place. In other words, the change from Stage-1 to Stage-3 is conditioned on a specific environment where the N/V alternation is structurally licensed.

Even though Bennett has correctly pointed out the necessity of Stage-2 for the change from NP to VP, he gives no explanation to how the necessary environment (i.e., \([bei\ N/V]\)) is structurally licensed. According to Bennett the change from \([bei\ N]\) to \([bei\ V]\) is due to an arbitrary chance: when the NP in \([bei\ NP]\) happens to be a bare N, the N will automatically be reanalyzed as a V. However, it is impossible, theoretically, to assume that the Category Changing Principle could apply wherever an X\(^0\) element appears in the language. Empirically this is not true either. For example, the verb \(ai\) (meaning 'to receive', 'to suffer', exactly like \(bei\) in Classical Chinese) could form a passive sentence in Modern Chinese with an N complement, but the N cannot be reinterpreted as a V.

(13) a. *Zhangsan ai da le san ci
    Zhangsan ai hit ASP three time
    'Zhangsan was hit three times.'

b. *Zhangsan ai mama da-zhe ne.
   Zhangsan ai mother hit-PROG PRT
   'Zhangsan is being hit by his mother.'

c. Zhangsan ai mama de da.
   Zhangsan ai mother 's hit
   'Zhangsan was hit by his mother.'
In (13a-b), the complement *da* cannot take a frequency phrase or a progressive aspect, but ordinary verbs can. On the other hand, ordinary verbs cannot be modified by a possessive modifier, but the complement *da* can, as seen in (13c). This indicates that the complement of *ai* cannot be reinterpreted as a V, even though it appears as an $X^0$ category. It follows that the Category Changing Principle only provides a necessary but not sufficient condition for the change from [bei NP] to [bei VP].

In short, previous analyses have contributed important chronologies for the development of [bei V] and [bei NP V], and they also provide a necessary condition (i.e., the [bei $X^0$]) for the development of N→V in bei passives in Classical Chinese. However, they provide neither structural analyses for the mechanism of the change nor internal explanations for the emergence of the [bei VP] and [bei IP] structures. Most importantly, examples in (8) and (9) are ignored in previous studies. As we will see below, these examples are extremely important for a structural analysis in which the internal mechanism of the syntactic change can be properly captured. Moreover, they are crucial in explaining why one can find the [bei Adv V] structure only after the Western Han and why the [bei IP] appeared only after the [bei VP].

3. **PrWd and [bei-V] Compound in Archaic Chinese**

Although previous analysis has captured the category change from N to V in [bei N/V], one fact seems not to have received enough attention in the literature: examples that can be alternatively interpreted as either a [bei N] or a [bei V] are all disyllabic, as seen in (6) and (10). In other words, only disyllabic [bei X] ('X' stands for either a noun or a verb) forms are recognizable for an alternative
interpretation of [bei N/V]. Based on this fact, I argue in this section that the disyllabic [bei V/N] forms were not formed arbitrarily but are a result of a PrWd or a compound motivated by the prosodic system of the language. This can be seen from the following analysis.

First, it has been widely recognized that disyllabic forms began to appear in the language during the Warring States Period. The development of disyllabicity, according to Feng (1995, 1997a), was chiefly due to the newly established disyllabic foot formation, which is caused by the loss of bimoraic feet in Old Chinese (c. 1000 BC). This is to say that the disyllabic [bei V] forms are merely instances of a more general development of disyllabicity in the language.

Second, according to Feng (1997a), compounds in Classical Chinese are instances of PrWds; hence, a compound must first be a PrWd, even though a PrWd is not, by necessity, a compound. This is shown in the following tree diagrams (The 'I-PrWd' stands for Idiomatized PrWd; see Feng (1997a: 239)).

A PrWd must be realized on a foot according to the Prosodic Hierarchy (McCarthy & Prince 1993), and a standard foot in

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3 There were trisyllabic [bei N] forms before the Han, however, they are not recognized as [bei V]. For example:

厚者入刑罰，薄者被穢肢。《墨子·貴義》
Hou zhe ru xingsha, bo zhe bei huichou.
thick one enter punishment, thin one get condemnation
'The ones who are kind get punishments and the ones who are mean get condemnations.'

As pointed out by Wang (1980:425), the huichou is a noun, rather than a verb.
Classical Chinese is disyllabic; therefore PrWds must also be disyllabic and so must be compounds. Given the prosodic requirement of disyllabicity and the resulting PrWds and compounds, the [bei X] forms can therefore be considered a result of PrWd development in the language, because they meet the prosodic morphological requirement to be a PrWd.

Third, given the development of compounds from PrWds in (14), it is natural to expect that when the [bei X] PrWds are repetitively used in the language, the two elements (bei and X) will be fixed, forming an Idiomatized PrWd. This will further lead to Lexicalization under which the [bei X] becomes a compound. Given this, we can conclude that the sufficient condition for the change from [bei N] to [bei V] is the prosodic morphological operation, i.e., the formation of PrWds and Compounds. This operation involves not arbitrary chances but a structurally categorized environment where the complement of bei is forced to be of the X\(^0\) category. In this circumstance the Category Changing Principle could apply constantly, and the reanalysis of the N as a V, as seen in (12), could take place naturally during the processes of idiomatization of a PrWd and lexicalization of a compound. In sum, the new requirement of disyllabicity forces the [bei N] phrase into a PrWd (one foot). In the [bei N] PrWd, the N may first be idiomatized and then lexicalized with bei. The former results in a fixity of the two elements, and the latter observes the Lexical Integrity Hypothesis — no intervention is allowed between the parts of a word.\(^4\) The idiomatization and lexicalization together give rise to the [bei N] disyllabic units. Within the idiomatized PrWd and compound, the N is always a monosyllabic element and hence guaranteed to be an N\(^0\) category structurally. Under this analysis it is natural to expect the reanalysis of [bei N] as [bei V] because the 'category changing through head' is now licensed by the prosodic morphological structure.

There is strong evidence supporting this analysis. First,

\(^4\) The LIH can be formally stated as follows: No phrasal-level rule may affect a proper subpart of a word. (Huang, 1984: 60).
theoretically, the X in [bei X] must initially become a V (or at least a gerund), thereafter an adverb can be used in front of it, as in (9). If so, the [bei X] forms in (6) must have been interpreted as either a noun or a verb. Note that without the alternative stage of [bei N/V], it would be impossible for new generations to come up with a different (i.e., the [bei V]) grammar from the old ones (i.e., the [bei N]). It is also difficult to conceive how an adverb could suddenly be allowed in the [bei N]. In short, there must be an intermediate stage in which the [bei X] forms can either be interpreted as a [bei N] or a [bei V]. The necessary [bei N/V] alternation supports the analysis given above, because the alternative interpretation can only be observed in disyllabic, not trisyllabic [bei X], environments, as seen in (10) and footnote (3). The disyllabic environment can therefore be formalized as a condition under which the change from [bei N] to [bei V] takes place:

(15) \( N \rightarrow V / [bei \_ \_]_{PrWd/Compound} \)

It follows that the [bei N/V] forms must be PrWds or compounds, otherwise there is no way to license the disyllabic [bei N/V] environment.

The examples given in (16) also provide evidence for the present analysis. In Classical Chinese we find that in some [bei N/V] forms, no modification of either kind (adjectival or adverbial) is allowed between the bei and the following element.

(16) a. 被圖於趙。《戰國策·齊策》
    bei wei yu Zhao.
    'was surround by Zhao'

b. *被趙之圖

    *bei Zhao zhi wei.
    'receive Zhao 's surrounding'
c. *被未圍於趙。
*bei wei wei yu Zhao
'was not surround by Zhao'

The non-existent (16b) shows that bei wei 'got surrounded' may have been lexicalized as a [bei N] compound, otherwise there is no reason why adjectival modifiers are not found within bei wei. Of course, one may argue that bei wei may have changed into a [bei V] structure and that adjectival modifiers are therefore not allowed before the V. If this is so, it is still difficult to explain why no adverbs are found between bei and the following V, as shown in (16c). Actually, no adverbs of any kind have been found inside these disyllabic [bei X] forms before the Warring States Period (or even before the Eastern Han), which indicates that these forms were compounds or at least idiomatized PrWds.

Third, as pointed out by Jiang (1994), the sentence given in (17) is different from the one given in (7).

(7) 萬乘之國被圍於趙。《戰國策·齊策》
Wan sheng zhi guo bei wei yu Zhao.
ten.thousand chariot's country bei surround by Zhao
'A state with ten thousand chariots was surrounded by Zhao.'

(17) 齐人常被兵于周。《左傳·昭公·30》
Zhulou ren chang bei bing yu Zhou.
Zhulou people often bei army at/by Zhou
'The Zhulou people often are invaded by Zhou.'

These two sentences are alike, yet, as Jiang (1994: 224) pointed out, whereas wei in (7) functions more like a verb, bing in (17) is a noun. However, if the syntactic structures of (7) and (17) are identical, as Jiang argued (i.e., [[bei X]V PP]), and if bing can also be used as a verb (see (18)), the question is why wei in (7) functions more like a verb but bing in (17) does not.
While the non-verbal interpretation of *bing* here may be attributed to a variety of reasons, there is a clear structural reason for its nominal usage in (17). Note that *bei wei* in Classical Chinese was always used as a PrWd, but *bei bing* was not, as seen in (19).

(19) a. 被吾甲兵。《左・桓・31》

\[
\text{bei wu jia bing.}
\]

receive my armor weapon

'(I) will wear my armor and carry my weapon.'

b. 將軍市被圍公宮。《史記》（Shiji.1557-2）

Jiangjun Shi bei wei gong gong.

General Shi get surround Lord's palace

'The General Shi was surrounded at the Lord's palace.'

The non-disyllabic environment excludes [*bei...bing*] from being a PrWd and hence gives it no chance to become a compound. *Bei bing* does sometimes appear as a disyllabic unit, however, unlike *bei wei*, *bei bing* was not always used as a disyllabic unit (19a). The occasional co-occurrence of *bing* with *bei* may have made *bei bing* difficult to be idiomatized and may have blocked it from being a morphological category. Hence, *bing* did not undergo the process of category changing from an N to a V in [*bei __*]. The difference between *bei bing* and *bei wei* is not that *bing* cannot be used as a verb and *wei* cannot be used as a noun, but crucially because they have two different syntactic structures in our analysis:

(20) a. [[*bei-wei*] \_V, \_[yu Zhao]PP]VP 
b. [[*bei bing*] \_V', \_[yu Zhou]PP]VP

*Bei-wei* is a PrWd and compound, while *bei bing* is still a V' category. This may be the reason why *wei* in [*bei __*] functioned like a verb, but *bing* did not.
The last piece of evidence comes from Modern Chinese. In Mandarin Chinese, there are many [bei-V] passive compounds (Ting 1995), for example:

(21) a. bei-bu 'be arrested'
    b. bei-po 'be forced'
    c. bei-dao 'be stolen'
    d. bei-dong 'be moved, passive'
    e. bei-gao 'be accused, defendant'

However, there are no passive compounds that are formed by other passive morphemes such as *jiao-bu 'be arrested', *rang-po 'be forced', *ai-gao 'be accused'. Why cannot other passive morphemes form a compound? Where does the unique property of bei-compound come from? Given the PrWd and compound origins of the Archaic bei forms as seen above, the question can be answered naturally. The modern [bei-V] compounds are remnants of classical compounds. Note that even though the modern [bei-V] compounds can be explained in terms of remnants, a question still remains: why are there no remnants of other type of passive compounds, but only bei? The peculiar behavior of bei-compounds in Modern Chinese implies that there must be a historical stage that bei developed independently from other passive morphemes in terms of their morphology and syntax. Precisely the [bei-X] forms must have been structured as a compound once in the history, so that in Modern Chinese [bei-V] compounds can be formed according to the old prosodic morphological structure. In that case, we must find out where, when, and how bei is able to form a compound with its complement. Given the chronological order of bei developments, i.e., [bei NP] → [bei N/V] → [bei [VP]], it is natural to see that the compound status of bei forms was established during the change from [bei N] to [bei V]. That is, the bei passive was born as a PrWd or a compound.

Based on all the evidence above, I conclude that the [bei N/V] Archaic forms are PrWds or Compounds.
4. Prosodically motivated [bei NP V] structure

We have seen in section 2 that the [bei [NP V]] structure started to appear in the Eastern Han. A question we must ask now is how the Archaic [bei-V] compounds developed into the Ancient [bei NP V] structure. Since the [bei-V] is a PrWd or a compound, how, after the Western Han, is the agent NP allowed to be inserted into a compound? In other words, what motivates the change from a compound ([bei-V]) to a phrase ([bei [NP V]])?

Traditionally, the new Post-Han structure [bei_IP[Agent V]] has always been considered a result of deleting the possessive marker zhi in the old form [bei NP's N].

\[
\begin{align*}
\text{bei zhongkou zhi chan} & \rightarrow \text{bei zhongkou chan} \\
\text{get mass-mouth 's libel} & \text{get mass-mouth libel} \\
\text{'receive people's libel.'} & \text{\ 'was libeled by people.'}
\end{align*}
\]

While this seems an easy way to relate the two constructions, there are good reasons to reject such an analysis. First, the [bei_{NP}[NP's N]] and the [bei_{VP}[NP V]] are two different structures, even though their surface order looks similar. Structurally, the [NP's N] is headed by a noun, while the [NP V] is headed by a verb. Dropping the possessive marker zhi in [NP's N] would not change a noun-headed category into a verb-headed category. Second, examples given in (13) show clearly that it is impossible for da 'hit' in ai mama de da 'got mom's hit' to become a verb in ai mama da 'get mom hit'. Thus it is highly unlikely that the [bei IP] was derived

5 See Wang (1980) and Yakhotove, S. E. (1986). Shimura also proposes that (Translated by S.-L. Feng):

In Liang zi bei Sujun hai (亮子被蘇峻害《世説·方正》)
"Liang's son got Sujun harm", Sujun is a proper noun, hence has more property of being a noun, hence has more property of being a noun, so that hai 'harm' can be understood as a verb and become a predicate, giving rise to the [bei NP V]. (Shimura 1974: 20)

However, it is not clear at all why hai 'harm' should be understood as a verb when a proper noun modifies it.
directly from the \[bei_{NP}[NP's\ N]\].

In order to see how the \([bei\ IP]\) comes about, it is worthwhile to look again at the diachronological development of \(bei\) sentences (see examples (3-9)):

\[(23)\]  
- ca. 400 BC  
  - (i) \([bei\ \text{NP}]\)
- ca. 300 BC  
  - (ii) \([bei\ N/V]_{PrWd/Compound}\)
  - (iii) \([[bei-V]\ \text{PP}]\)
- ca. 100 BC  
  - (iv) \([bei\ VV]\)
- ca. 100 AD  
  - (v) \([bei_{VP}[Adv\ V]]\)
- ca. 200 AD  
  - (vi) \([bei_{IP}[NP\ V]]\)

Considering (ii) and (iv), it is clear that while the V in \([bei-V]\) of (ii) is a part of a PrWd and compound, the \([bei\ VV]\) is not a PrWd and hence cannot be a compound (see (14)). In (v), an adverb was used before the [V], indicating that the [Adv V] is a VP embedded under \(bei\). Given (v), I argue that the \([bei_{VP}[NP\ V]]\) in (vi) is not derived from (ii) by inserting an Agent NP in the \([bei-V]\) forms; instead, (vi) is developed on the bases of \([bei_{VP}[Adv\ V]]\), i.e., the Agent NP is inserted before the VP. In fact, the Agent NP is not allowed to be inserted before the V in (ii) because, in our theory, the \([bei-V]\) is a compound, thus the Agent NP must be introduced as an oblique argument by a preposition as in (iii). On the other hand, since the VP is an independent active clause embedded under \(bei\) (see Feng, 1997b), the only way for the VP to have an Agent is to form a \([NP\ VP]\) structure. First, Agent theta role is thematically higher than other theta roles in the Thematic Hierarchy. Second, according to the Linear Correspondence Axiom (Kayne 1994), the Agent NP must appear in a Spec VP position, i.e., to the left of the VP. Thus, the Agent NP, if it appears, must occur before the VP in the \([bei\ VP]\) phrasal passives, giving rise to the \([bei\ [NP\ V]]\) structure.\(^6\) Under this analysis, the question we must now ask is not why the agent NP could appear before the embedded VP (it must), but how the V — a part of compound in (ii) — becomes an independent VP clause, as in (v). This question is dealt with in the

\(^6\) I would like to thank one of the reviewers for pointing out this question.
next section.

4.1. The Origin of the [bei VP] structure

In this section, I will propose that it is the [bei [σσ]v] structure that motivates the syntactic change from [bei-V] compounds to [bei [VP]] phrases. The argument made here claims that prosody determines what can and what cannot be a morphological category. As seen above, the development of compounding in Classical Chinese is due to the newly established disyllabic foot formation. Under the prosodic system of Classical Chinese, the number of VV compounds, together with other types of compounds (i.e., NN, MH and VO compounds, see Cheng 1981) developed rapidly after the Han. However, there were no trisyllabic verb compounds that were found at that time. It is also true that no trisyllabic V-C(omplement) compound has been found in the language, even if three syllable V-C phrases are very common. There is no length constraint on phrases. This indicates that although there was a strong force to create disyllabic verb compounds in the language, trisyllabic verb compounds were disallowed by the prosodic system. It follows that the prosodic system has a dual function. First, it forces disyllabic V-C phrases to become PrWds and compounds. Second, it prevents trisyllabic V-C phrases from being PrWds and compounds. This, as seen below, is exactly what has happened in the bei passives in Classical Chinese.

We have seen that the disyllabicity requirement created the [bei-V] as a compound and that the prosodic system has produced not only [bei-V] but also other VV compounds during the Western Han. A remarkable consequence of the disyllabicity is an entirely new set of vocabulary: a great number of ordinary monosyllabic verbs now have a disyllabic counterpart (Feng 1997a). This

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7 In Modern Chinese there are no VVV compounds either (see Feng 1997a).

8 The reader is referred to Feng (1995a: Ch-3; 1996) for a detailed explanatory analysis on this topic.
happened especially during the Eastern Han Dynasty (25-220 AD). For example:

(24) a. 被謗 bei bang 'got slandered' (Shiji, 2482.4)
    被誹謗 bei huibang 'got slandered' (Lunheng, 2.4.13)

b. 被刑 bei xing 'got executed' (Hanfeizi, 14.4.48)
    被刑戮 bei xinglu 'got executed' (Lunheng, 80.13.2)

c. 被戮 bei lu 'got executed' (Shiji, 31.32.2)
    被刑戮 bei xinglu 'got executed' (Shiji, 2566.4)

As a result, what was expressed by a [bei-V] form before can now be expressed by a new [bei VV] pattern. However, the [bei VV] and the [bei-V] are two different prosodic structures, as shown in (25) (the V stands for 'verb' and C for 'complement').

(25) PrWd *PrWd
    / \ / \ V C V C
    | | | | bei hai bei huo-hai
    σ σ σ σ

More importantly, the two prosodic structures, as seen before, represent two different grammatical categories: The [bei-V] is a morphological category because it is a PrWd and hence a legitimate compound. Yet the [bei VV] cannot be PrWd and compound; rather it can only be a phrasal category. As a result, the [bei VV] forms are forced by the prosody to give rise to a new [bei VP] structure. This, I argue, is what allows the [bei-V] passives to be developed into [bei VP] phrases. Of course, another crucial question is: Is it really true that trisyllabic V-C structures cannot be compounds but can be only phrases? As seen below, there is strong evidence from both Modern and Classical Chinese supporting this analysis.

First, in Modern Chinese a monosyllabic verb with a disyllabic complement can never form a compound. There are no [σ-σσ]v compounds that have been attested in the language, though there are
many \([\sigma]_V [\sigma\sigma]\) forms that look like compounds. For example:

(26) a. kai wanxiao
    make joke
    'make jokes.'

    a' kai ta de wanxiao
    make he 's joke
    'make fun of him.'

    a" *kai wanxiao ta
    make joke him
    'make fun of him.'

b. pao mogu
    soak mushroom
    'dawdle.'

    b' Ni yijing pao le san tian mogu le.
    you already soak ASP three day mushroom ASP
    'You were dawdling for three days already.'

In (26), although the Vs with their complements are highly idiomatized, all the V-C expressions must be analyzed as idiomatized phrases rather than as compounds, given that modifiers can easily be inserted before the complements, which is an obvious violation of the LIH (Huang 1984). On the other hand, disyllabic V-C compounds are very common in Chinese. For example:

(27) a. de-zui
    get-guilt/blame
    'get guilt/blame (to offend).'

    b. Ta de-zui le laoban.
    he get-guilt/blame ASP boss
    'He offended his boss.'

    c. *He de le yici zui.
    He get ASP once guilt/blame
    'He caused offense (to someone) once.'
Dezui must be considered a compound, because it can take an object and cannot be separated. Why then do trisyllabic V-C forms in (26) behave differently from the disyllabic ones in (27)? The answer is clear: Only disyllabic V-C forms (PrWds) are possible to become a compound, while the trisyllabic ones (non-PrWds) cannot. The prosodic system determines whether a V-C string can or cannot become a compound, because a compound must first be a PrWd in Chinese (Feng 1995).

Second, the following bei passive forms in Modern Chinese provide further evidence for the hypothesis that only disyllabic, not trisyllabic, V-C strings can be lexicalized as compounds:

(28) a. Zhangsan bei bu le.
    Zhangsan bei arrest ASP
    'Zhangsan was arrested.'

  a'. *Zhangsan bei jingcha bu le.
    Zhangsan bei police arrest ASP
    'Zhangsan was arrested by the police.'

b. Zhangsan bei bu-huo le.
    Zhangsan bei arrest-catch ASP
    'Zhangsan was arrested.'

  b'. Zhangsan bei jingcha bu-huo le.
    Zhangsan bei police arrest-catch ASP
    'Zhangsan was arrested by the police.'

Bei-bu in (28a') is a disyllabic form, and hence it respects the LIH (no intervention is allowed between bei and bu). Yet the LIH is totally ignored in the trisyllabic ones. The fact is, only (if not all) disyllabic [bei V] forms obey the LIH. In contrast, all trisyllabic [bei VV] forms can be intervened by an agent NP. This shows, once again, that only disyllabic [bei V] forms are qualified to be a compound, while the trisyllabic [bei VV] forms are incapable of being a PrWd, let alone a compound.

Third, the argument that trisyllabic V-C forms are phrases but not compounds is also supported by the Classical example in (9).
(9) 槲被暴誅。《吳越春秋·闥閭內傳》
heng bei bao zhu.
unexpectedly get violently kill.
'was violently killed for no reason.'

It is clear that the [bei [Adv V]] forms are [bei VP] phrases, because an adverb can freely appear before the V. This indicates that the [Adv-V], must be an independent VP. Accordingly, the trisyllabic [bei [Adv V]] cannot be a lexical, but a phrasal, category.

Given all the evidence from both Classical and Modern Chinese, there is no doubt that the disyllabic [bei-V] forms are different from the trisyllabic [bei VV] forms in the language. The difference can be captured in terms of a morphological category (PrWd and compound) versus a syntactic category (phrase). The [bei VV] and [bei Adv V] structures will thus be considered as newly developed [bei VP] structures, and hence the development of [bei NP V] could be further motivated.

4.2. Further Remarks

Given the theory presented here, we can now explain why it took so long (about 400 years, from 300 BC to 100 AD) for the phrasal passives to develop. The long process is necessary. For one thing, the [bei-V] disyllabic compounds were motivated by the prosody; hence, they were also protected by the prosody. For another, unless some new prosodic factors developed a role in the language, the PrWd would not allow the monosyllabic V to be separated from the bei. As expected, the separation is indeed triggered by a new prosodic factor, namely, the newly developed trisyllabic [bei VV] forms that are triggered by the sharply increased disyllabic verbs at the time of the Eastern Han. Since the prosodic system disallows a trisyllabic V-C structure from being a compound, a separation of the disyllabic VV from the bei is inevitable under the development of [bei VV] forms. Obviously, for such a new prosodic factor to take effect, the separation-process must wait for the full development of disyllabic verbs. This is why it took so long for phrasal passives to evolve and this is why the separation-process
could only emerge by the Eastern Han.

Interestingly, contrary to the slow progress from the morphological passive ([bei-V], ca.400 BC) to the phrasal passive ([bei [Adv V]], ca.100 AD), the long passive structure [bei [NP V]] (200 AD), as seen in (3), was established soon after the appearance of the phrasal passive [bei [Adv V]]. This is also expected. When the V becomes a VP in [bei [Adv V]], as seen before, the Agent NP cannot be introduced by a preposition; instead, it must appear before the VP, yielding the [bei [NP VP]] structure. In other words, it is the [bei VP] that gives rise to the [bei [NP VP]]. This is why the [bei [NP VP] must wait for the rise of the [bei VP], and it is why once the [bei VP] emerges, the [bei [NP VP]] is developed.

There is also another reason why the Agent NP is favored in the [bei VP] structure. The Agent NP could create a clear structural boundary between the bei and its complement and hence could add more prosodic weight to the embedded predicate in order for the VP to be completely independent of bei. For one thing, the Agent NP could enable the embedded clause to form an IP, making the [bei VP] structurally distinguishable from the compound passive. For another, the Agent NP could force the verb to be deeply embedded under and linearly separated from the bei, making the [bei VP] prosodically impossible to be reanalyzed as compound when the embedded VP is formed by a single monosyllabic verb (see footnote (10) below). Given the structural possibility and the prosodic preference of the appearance of the Agent NP in [bei VP], the quick development of the [bei IP] after the [bei VP] is therefore expected.

Although phrasal passives, including the long passive, can be attested as early as the late Han dynasty (ca. 100-200 AD), they were not productive until 300-400 years later, in the Six Dynasties (420-581 AD) (see Tang, 1987; Mei, 1990). They did not become the dominant passive construction until the 10th Century (the Tang-

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9 The embedded IP is indeed what has been proposed for the long passive sentences in Modern (and Classical) Chinese in terms of an A'-movement analysis (see Huang 1997).
Song Dynasties). Why was this? While the lower productivity and slower progress may be attributed to a variety of reasons (see Wei, 1994), there is a clear internal reason for their further developments, given the assumption that phrasal passives were triggered by prosody and hence should also be accelerated by prosody.

We have seen that heavier verbs are the triggers for phrasal passives. We also know that a phrase with a complex structure is prosodically heavier than one with a simple structure (see, Rickford, Wasow, Mendoza-Denton, & Espinoza, 1995). Thus, if the language developed a more complex verbal predicate after the birth of the [bei VP] and [bei NP V], the phrasal passives would be more satisfied and hence more productive. What is interesting is that (i) only by the Six Dynasties did the Verb-Resultative (and other complex) predicates begin to appear in the language as seen in (29-I) and (ii) the phrasal bei passives also started to be more productive during the Six Dynasties, as pointed out by Wei (1994).

(29) I. VR verbs

a. 二師并皆打死。〈旌異記·.smartlin·85〉
   er shi bing jie da-si. (Jinyijizhulin.85)
   two master all hit-death
   'The two masters were both hit to death.'

b. 乃打死之。幽明录〈太平廣記·438〉
   nai da-si zhi. (Taipingguangji.438)
   then hit-die him.
   'then killed him.'

II. bei passives

a. 樹被風吹倒。〈闡那崛多譯〈佛本行集經〉727〉
   shu bei feng chui-dao. (Fobenxingjijing.727)
   tree get wind blow-fall
   'The tree was uprooted by the wind.'
b. 順衡被武帝謫為鼓吏。（世說·言語）

Mi Heng bei Wu Di zhe wei gu-li.
Mi Heng get Wu emperor relegate become drum-officer
'Mi Heng was relegated by Emperor Wu to become a drum-officer.'
(Shishuo Xinyu. Yanyu)

The parallel appearances of phrasal passives and complex predicates (V-R, V-NP, V-PP, V-NP-VP...etc., see Wei, (1994)) show clearly that the heavy predicates have advanced the development of phrasal passives. Under the hypothesis that phrasal passives favor a heavy verbal predicate, and given the fact that by the Six Dynasties verbal predicates were more complex than before, it is not surprising that there were more phrasal passives in the language.

As many new complex predicates developed during the 10th Century (aspectual markers, [V-de S] structures, and ba constructions...etc.), the bei passives were produced more extensively and finally became the dominant passive construction in the language. As a consequence, the heavy predicate requirement resulted in a general ban on monosyllabic verbs in the [NP bei NP V] long passive construction.10 Even though it is difficult to date exactly when this happened, in Modern Chinese a monosyllabic verb is clearly banned in [NP bei NP V] long passive construction, as seen in (30).

(30) a. *Ta bu xiang bei ren da
        he not want bei one hit.
        'He does not want to be hit by someone.'

        b. Ta bu xiang bei ren piping.
           he not want bei one criticize
           'He does not like to be criticized by someone.'

10 The [bei VP] will not be affected by a monosyllabic verb simply because if the VP is consisted of a monosyllabic verb only, the result would be a [bei σ] disyllabic unit which is prosodically indistinguishable from the [bei V] (PrWd) and hence could be a perfect compound passive.
In our theory, the ban on monosyllabic verbs in long passives is a natural result of the historical development of the [bei V] structure. Originally the V in the [bei-V] compound passive had to be heavier than a monosyllabic verb in order to become a phrasal passive [bei VP] structure. When the Agent NP was introduced into the embedded VP, the VP was forced to be even stronger. Since the newly developed VR structure and other complex predicates satisfy this requirement, there were more phrasal passives in the language. By 10th century, when aspectural markers, [V-de S] structures and the Ba-constructions were born, the V-predicate was syntactically guaranteed to be more complex than ever. The phrasal passives thus became dominant and a ban on monosyllabic V in long passives was inevitable.

5. Summary

In this paper I have argued that the [bei-V] forms in Archaic Chinese were born as a PrWd or compound motivated by the prosodic requirement of disyllabicity. The disyllabicity, in turn, motivated the [bei VV] and [bei Adv V] phrases, giving rise to the [bei VP] structure. The VP in [bei VP] had to be prosodically heavier in order to be an independent active clause. The requirements for heaviness and independence of the VP finally motivated the [bei [NP VP]] structure where the complement [NP VP] was an IP and hence obviously heavier than a VP.

Based on this analysis, [bei-V], [bei VP] and [bei NP VP] structures can all be viewed as prosodically motivated syntactic structures. It was the prosody that forced the [bei N/V] into a compound, and it was also the prosody that separated [bei VV] into phrases. The higher productivity of phrasal passives was provoked by prosody, and the ban on monosyllabic verbs in long passives also resulted from prosody.

Since both the compound passive ([bei-V]) and the phrasal passive ([bei VP] and [bei NP VP]) are prosodically motivated, both are constrained by the prosody. The phrasal passives cannot contain a verb of less than two syllables, otherwise either (i) an
ungrammatical sentence will be caused in long passives as seen in (30), or (ii) an indistinguishable structure will result between the [bei-V] compound and the [bei VP] phrase (see footnote (10)). On the other hand, the compound passive cannot have a verb of more than two syllables as seen in (28), otherwise it will become a [bei VP] structure. The present analysis is consistent with the fact that only disyllabic [bei V] forms are accessible to the process of lexicalization; hence trisyllabic [bei VV] passives should all be considered a phrasal category.\footnote{In traditional analysis lexical passives in Modern Chinese are all disyllabic forms and no one has claimed that trisyllabic forms such as bei pi-ping 'be criticized', bei dai-bu 'be arrested'...etc. are compounds. The traditional treatment confirms my analyses given here. (see McCawley (1992), Feng (1997b) for different accounts of the short passives.)}

To sum up, the present study not only offers a diachronic explanation for the origin of the bei passives but also provides historical evidence for synchronic analyses of bei passives, explaining why the [bei VV] forms are better to be treated as a phrasal category and why there is a general ban on a monosyllabic verb in long passive constructions in Modern Chinese. The present study also shows that syntactic explanations must be combined with a prosodic analysis in order to account for the grammar of natural sentences and the syntactic changes of natural languages.

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