Editors
Dan Xu
INALCO
Paris, France

Jingqi Fu
Department of International Languages and Cultures
St. Mary’s College of Maryland
St. Mary’s City, MD, USA

Space and Quantification in Languages of China
Finally, we would like to express our deep gratitude to Craig Baker, our trilingual proofreader, for his patience, competence, and devotion in helping us with English correction and proofreading. We are equally grateful for Murielle Fabre’s skillful help for the typesetting of the entire manuscript.

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Dan Xu
Jingqi Fu

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1. In phonology, phonemes and onomatopoeia remain iconic, while underspecified feature values and duality of patterning are symbolic;
2. In syntax, the distribution of old/new and definite/indefinite information remains iconic, while time/space displacement and the representation that underlies our knowledge of syntactic structure are symbolic.

An aha! flash of insight may have occurred when our ancestors ‘realized’ (it could also have been a process rather than a punctual moment) that the expression of $<$x, y and z$>$ in language could work as a symbolic rather than iconic means of expression, i.e., that the order (volume, position, etc.) of {x y z} linguistic elements was irrelevant, making it symbolic rather than iconic. Old always comes first, while new always comes last and is always more recent. As humans, that is the only way we are wired to interpret the flow of time, that is, via the order of unfolding of events, including the inescapable fact that the new always follows the old.

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References


Prosodically Constrained Localizers in Classical and Modern Chinese

Shengli Feng

Abstract This paper discusses the Chinese localizers in terms of prosody. It argues that the development of localizers in Classical Chinese was a typological change from a synthetic to an analytic language type (Huang, Syntactic analyticity: the other end of the parameters. LSA Summer Institute Lecture Notes. MIT/Harvard, 2005, Xu, Typological change in Chinese syntax. Oxford Press, Oxford/New York, 2006) conditioned on the “multi-syllabic constraint” (Sun, Two conditions and grammaticalization of the Chinese locative. In Xu D (ed) Space in languages of China: cross-linguistic, synchronic and diachronic perspectives. Springer Science, Heidelberg, pp 199–288, 2008) which is a sub-case of the prosodic effects determined by the Nuclear Stress Rule and the newly developed disyllabic foot structure (Feng, Linguistics 6:1085–1122, 2003). Historical evidence is provided to demonstrate the grammaticalization process of localizers with the parallel development of light verbs and light nouns in the history of Chinese.

Keywords Localizer • Prosodic constraints • Light verbs • Light nouns • Typological change • Syntheticity and analyticity

1 Introduction

Locational phrases such as ‘on NP’, ‘at NP’ and ‘in NP’ need a localizer in Chinese for non-local nouns, for example:

(1) a. Shū zài zhúqí shāng book exist table on 'The books are on the table.'

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b. 他从drawe insider take out one CL book
   ‘He took out a book from a drawer.’

c. 他来自Beijing come
   ‘He comes from Beijing.’

In Archaic Chinese, however, no localizers were required as exemplified in (2a-b).

(2) a. 八佾舞於庭, 是可忍,孰不可忍也. (論語・八佾 Analects of Confucius)
   八佾 wǔ yì tīng, shì kě rěn yě, shú bù kě rěn yě.
   8x8 dance at court, this can tolerate Prt. what not can tolerate Prt
   ‘(Confucius said of Jish) Eight rows of eight dancers in the house courtyard—if this can be
tolerated, what cannot be tolerated?’

b. 樹吾墓, 槅可材也. (左傳・魯哀公 11 年 Zuo Zhan)  
   树 wù mù jí, jí kě cí yě.
   Plant my tomb catalpa, catalpa can good-quality prt
   ‘Plant a catalpa tree on my tomb; it can be used as timber.’

c. 六十 shì yì zài tāi *(shàng) tiǎowā.
   sixty four CL people at stage top
   ‘Sixty-four people are dancing on the stage.’

Neither tīng ‘court’ nor tāi ‘stage’ are inherently locative nouns and (2c) is ungrammatical without a localizer (shàng) in Modern Chinese but there are no localizers attested in Archaic Chinese in general (Chao 1968; Wang 1958; Chou 1961; Wei 2003; Feng 2014). Actually, from an etymological point of view, the localizers which developed in Medieval Chinese and are used in Modern Chinese, namely, qiàn ‘ahead, before’, hòu ‘back, behind’, shàng ‘above’, xià ‘below’ and II ‘in’, were presumably all nouns in Archaic Chinese. Paleographic evidence and cognate relationships show that localizers in Medieval Chinese all originated as concrete objects in Archaic or pre-Archaic Chinese. For example, qiàn had an old meaning, “the front part of a boat (or a toe)”; hòu very likely referred to ‘buttocks’, and II 豎 was certainly a noun meaning ‘inside’ in Old Chinese. Based on the concrete object origin and the general principle that words for abstract notions are derived from lexical content items with concrete meanings, the terms shàng ‘top’ and xià ‘bottom’ in may be derived cognitively from tāng 堂 ‘high land, court’ and yu 公 ‘marsh land, lowlands’. (see Zhang Taiyan’s Wen Shi).

The noun-like usages of pre-localizers such as shàng, xià, etc. can be seen in the following examples.

1 See the following quote from Mengzi “今惡侮而居不仁，是猶惡侮而居下也”(下 = 孟子公孫丑上 Mengzi), where 下 xià is equal to 下 wā.
The surface structure of (4) is syntactically derived (i.e., $[p_1 \mathbf{LP} \mathbf{NP} \mathbf{L}_2 \mathbf{L}_3]$) through a head movement caused by the [+strong] feature under $\mathbf{L}$ (the LOCAL feature in Huang’s system). This structure, as Huang argues, will generate all Archaic forms exemplified in (2). The locative words like $\mathbf{xìa}$ mentioned above, however, were grammatically required later on in environments like the following (taken from Peyraube 1994; see also Cao 1999).

(5) 孔子去費適宋, 與弟子習禮大樹(*) (史記-孔子世家 Shi ji)

Kongzi qù dài shì Sòng, yǔ dìzi xí lǐ dá shù xià
Confucius left Cao to Song, with disciple practice rite big tree under
‘Confucius left Cao and went to Song to practice the rites with his students under a big tree.’

As pointed out by Peyraube (2003), prepositions were required to be overt in the Pre-Medieval Chinese period for non-locative nouns, and so it may seem that the non-existence of (5) is due to the missing preposition. However, PPs are perfectly grammatical with a missing $\mathbf{P}$ in Archaic Chinese, as seen in (6).

(6) 子産使校人畜之池。孟子·萬章上

Zichan shǐ Xiàorén xù zhī chí
Zichan order Xiaoren put it pool
‘Zichan orders Xiaoren to put it in the pool.’

The question then is why an overt localizer (cf. $\mathbf{xìa}$) in (5) is necessary while it is not so in (6) with respect to the null $\mathbf{P}$ structure. In fact there is no example in which a locative phrase is formed with a non-locative noun where both the localizer and the preposition are overtly missing. This situation has motivated Huang (2009) to come up with a new analysis within the following tree structure.

(7) $\mathbf{PP}$

\[
\begin{array}{c}
\text{P} \\
\text{LP} \\
\text{Spec} \\
\text{L} \\
\text{NP} \\
yú at \\
[\text{place}] \\
[\text{bil}]
\end{array}
\]

According to Huang (2009), when the [+strong] feature of a null $L$ is lost in Medieval Chinese, the ‘$L$’ must be filled with a lexical head (the localizer $\mathbf{xìa}$, $\mathbf{shàng}$, $\mathbf{lì}$, etc.), as in (7). When the object $\mathbf{NP}$ ‘big tree’ moves up to the Spec of $\mathbf{LP}$ (for reasons of Case), the surface structure $\text{dà shù xià} ‘under a big tree’ is derived. The difference between Archaic and Medieval (including Modern) Chinese is therefore formally characterized as a loss of the null localizer (i.e., the strong functional feature) which is replaced by phonetically realized localizers.

The structure of locative PPs provided by Huang in (7) is extremely important for formal analyses of Classical Chinese and it motivates a number of questions as well. First, a natural question raised by Huang’s analysis is the cause of the loss of [+strong]. What happened to the [+strong] feature and how did it come to disappear around the Han dynasties?

Second, there are cases where both the localizer and the preposition are overtly missing, during and after the Pre-Medieval period. For example (see Li Guo (2013) for more examples of this type).

(8) a. 道之塲。(史記-管晏列傳 Shi ji, ca. 100 BC)

Zào zhī tū
Meet him road
‘meet him on the street.’

b. Fēi jī yào luò zài jiē * (shàng) (Modern Chinese)

Aircraft wants land at street
‘The aircraft would like to land on the street.’

c. 齊名之竹竿。(史記-春秋名載 Shi ji, ca. 100 BC)

Qí fǎ zhú zhū zū bō
Please write it bamboo silk
‘Please write it on bamboo and silk.’

d. Qí fǎ là tā xiè zài zhí zhuī * (shàng). (Modern Chinese)

Please ba it write at bamboo
‘Please write it on the bamboo.’

The type of counterexamples given in (8) occurred not only in Medieval Chinese, they can also be found in Modern Chinese. For example (see Chu 2004):

(9) a. 你在黑板上，我在書上寫

$N̄i zài hēibān xiě, wǒ zài shū shàng xiě$
You at blackboard write, I at book up write
‘You write on the blackboard, and I write on the book.’

b. 你在黑板上，我在書上寫

$N̄i zài hēibān shàng xiě, wǒ zài shū shàng xiě$
You at blackboard up write, I at book up write
‘You write on the blackboard, and I write on the book.’

The locative phrase $zāi hēibān ‘on the blackboard’ in (9) is perfectly grammatical without a localizer. As a result, it is not always the case that the ‘$L$’ must be filled with a lexical head by phonetically realized localizers like $xìa$, $shàng$, etc. Why is this so? It is a mystery not only in modern Chinese but is also directly related to historical syntax of Chinese. This is because, first, it is unclear
why the ‘L’ feature in Medieval Chinese (7) can be realized by a monosyllabic lexical-head (cf. shāng, xià, lì, wèi, etc.) when the locative phrase is an adjunct (10a), but the ‘L’ must be disyllabic when the locative phrase is a predicate, as observed in Sun (2008). For example:

(10) a. 终日在里面默坐 (朱子語類：卷一百一十三 Zhu Zi Yulei)
Zhōng-rì zài nèi mò zuò
all-day at inside quiet sit
‘Sit quietly inside all day long.’

b. 有幾個秀才在里*面 (警世通言 Jingshi Tongyan)
Yǒu jiǔ jī shòu cái zài nèi *mian
Have several-CL scholar at in *(inside)
‘There are several scholars inside.’

As Sun pointed out (2008), there is a complementary distribution between monosyllabic localizers and disyllabic localizers in terms of adjunct versus predicate. However, it is unknown why 三-面 ‘in-side’ must be used when it serves as a main predicate with 在 (10b) while a monosyllabic localizer 里 ‘inside’ is enough to realize the L-feature in (7) if it is used in a non-locative (adjunct) position (10a). In other words, why should the L-feature be sensitive to predicate/adjunct and mono-/di-syllabic distinctions, respectively?

Still another mystery remains involving localizers in Modern Chinese as discussed in Feng (2003). There is a grammatical contrast between monosyllabic and disyllabic localizers in nominal structures as in the following:

(11) a. 書在桌上(上)
Shū zài zuòshang (tou)
Book at table top (side)
‘The book is on the table.’

b. 書在桌子的上方(上)
Shū zài zuòzhì de shàng (tou)
Book at table de top (side)
‘The book is on top of the table.’

The question is: what is the syntactic status of monosyllabic localizers and their corresponding disyllabic localizers?3

3One reviewer points out that "in (11b) de requires a noun as the constituent following it (as its complement) and shàngzhi means itself can clearly serve as a noun while shàng cannot." I agree with the reviewer that de requires a noun as its complement and shàngzhi means serves as a noun (the same is observed in Classical Chinese as seen in (3) above). The question involved here, however, is why only disyllabic localizers can serve as nouns but not monosyllabic ones. This categorical distinction can best (if not only) be characterized in terms of prosody, namely, disyllability as a necessary (if not sufficient) condition for L to function as an N, which has been considered the grammatical function of morphological prosody (see Feng 2009; Wang 2009).

All of the questions above call for further explanation and analysis of the mysteries regarding the bizarre behavior of localizers in Chinese historical syntax. In what follows I will propose a prosodic analysis to account for the questions raised above.

3 Prosodically Motivated Localizers

Although the structure of localizers is syntactically generated and universally formed (Huang 2009), the original emergence and further development of such structures would not have taken place without a proper motivation (assuming that prosody is a parametric factor for activating UG operations). What then motivates the change in the first place and what constraints their development later on? To date, there are no adequate explanations for these questions. What I would like to suggest in this paper is the following: It is prosody that gave rise not only to the new grammar of localizers but also to the new light-verb and light-noun syntax, emerging around the same time in Chinese history. Evidence and analyses for the prosodic hypothesis of the development of localizers are given below.

First, as seen in (3), locative words like shāng ‘top’ and xià ‘bottom’ could occur in [N之下] (‘the bottom of N’) in Archaic Chinese functioning as an independent noun. This situation, however, changed in Medieval Chinese. That is, more and more locative words were adjacent to monosyllabic nouns forming a disyllabic unit (IN xià/shàng), as shown in (12).

(12) a. 埋之郊城之下 (左傳 僖公 33年 Zuo Zhan)  
Zāng zì Kuí chéng xià
Bury it Kui City’s bottom
‘Bury him at the bottom of Kui City.’

b. 齊梁之兵遂合城下 (史記 張儀列傳 Shijí)  
Qi Liáng zhǐ bīng lián xià chéng xià
Qi Liang’s army join at City bottom
‘Qi and Liang’s army joined at the bottom of the city.’

The tendency to change from [N’s xià] (‘N’s bottom’) to [N xià] (‘N bottom’) was prosodically motivated (forming a Disyllabic Unit) and modified the syntax (locative words became localizers). This, I argue, is the origin of localizers that changed from locative nouns to a functional category of localizers by gradual loss of their noun properties (Roberts 2007; Roberts and Roussou 2003). Both situations, being a syntactic head of non-locative noun and binding prosodically with a non-locative noun, caused the head (i.e., the locative word xià, shàng, etc.) to be reanalyzed as occupying the L position (13), and finally gave rise to a new category of localizers in the history of Chinese, as seen (14).
Prosodically Constrained Localizers in Classical and Modern Chinese

Note that in Modern Chinese, monosyllabic place names are ungrammatical when they are used alone. For example:

(15) a. (孔子)已而去魯。(史記·孔子世家 Shiji - Kongzi Shijia, ca. 100 BC)

(Kongzi)yì’er qù Lǔ

‘Confucius shortly depart Lu State shortly after.’

b. Mìngtiān wǒ xiǎng qù *Tōng

tomorrow I want go Tong

‘I want to go to Tong County tomorrow.’

c. Mìngtiān wǒ xiǎng qù Tōng Xiàn

tomorrow I want go Tong county

‘I want to go to Tong County tomorrow.’

d. Mìngtiān wǒ xiǎng qù Dāxìng

tomorrow I want go Daxing

‘I want to go to Taxing County tomorrow.’

The prosodically determined grammaticality with respect to the monosyllabic place names in Modern Chinese (15b) is a result of a typological change from moraic foot structure (Archaic) to syllabic foot structure (Medieval), starting as early as the third century BC and accelerating during the Han Dynasty (100 BC; see Feng 1997). As a consequence of the typological change, a clear contrast between a monosyllabic noun with a localizer (xià, shāng, lì, etc., i.e. \([V + [P \| [\sigma_{\text{M}} + \text{xia} \text{ T}]]])\) and a disyllabic noun without one (i.e., \([V + P \| [\sigma_{\text{M}} + \text{null}]])\) is seen in the following examples.

<table>
<thead>
<tr>
<th>Time</th>
<th>Monosyllabic</th>
<th>Multi-syllabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shang dynasty (1100 BCE)</td>
<td>40</td>
<td>9</td>
</tr>
<tr>
<td>Autumn and Spring</td>
<td>42</td>
<td>61</td>
</tr>
<tr>
<td>(777–476 BCE)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Qin dynasty (221–207 BCE)</td>
<td>4</td>
<td>78</td>
</tr>
<tr>
<td>Western Han (206 BCE-24 CE)</td>
<td>1</td>
<td>138</td>
</tr>
</tbody>
</table>

*Thanks to a reviewer for pointing out the following ‘counterexample’:

Wǒ zuòuī lì Jīng

I yesterday depart Beijing

‘I left Beijing yesterday.’

Unlike (15b), a monosyllabic place name Jīng is allowed to be used alone in above sentence, contrary to the statement that monosyllabic place names are not free forms in Modern Chinese. However, as pointed out by Huang and Feng (2009), place names like Jīng can only co-occur with a monosyllabic word within a disyllabic template (i.e., li jīng ‘depart Jīng’), which is called Qian-ou Ci 旗偶词 ‘monosyllabic word used in disyllabic template’, thus, the following sentence where Jīng is used outside a disyllabic template is ungrammatical:

Wǒ zuòuī lǐkāi *Jīng

I yesterday depart Beijing

‘I left Beijing yesterday.’

As a result, Qian-ou Ci like Jīng is not a counterexample to the generalization given in this paper.

3See Feng 1997 for the notion of prosodic word in Chinese.
The argument for prosodically motivated localizers is further supported by the fact that only in the Nuclear Stress (NS for short) position, as seen in (19), are disyllabic localizers necessary and hence developed. For example:

(18) a. Qutiai dàiyàn dòu wūng nà (biàn) qiānyí autumn wild goose all to south (side) migrate
   'All wild geese migrate south in Autumn.'

b. Qutiai dàiyàn dòu qiānyí dào nán = (biàn) le. autumn wild goose all migrate to south side Asp.
   'All wild geese migrate south in Autumn.'

As Sun (2008) has pointed out, there is a syllabic contrast in terms of the grammaticality of [direction + localizers] in different syntactic positions. Although the observation is correct, a question remains: What is the determining factor involved here? Actually the complementary distribution of the localizers used between pre-verbal and post-verbal positions is, I would like to propose, a natural consequence of applications of the Government-based Nuclear Stress Rule (NSR) stated as follows.

(19) The Government-based Nuclear Stress Rule

Given two sister notes C1 and C2, if C1 and C2 are selectionally ordered (see Zubizarreta 1998), the one lower in selection ordering and containing an element governed by the selector is more prominent.

Following Liberman (1975), Feng (1995) and Zubizarreta (1998), Feng (2003) proposed that the Nuclear Stress of a sentence is, informally speaking, assigned by the verb to its mutually c-commanded (i.e., directly governed) complement, termed the Government-based Nuclear Stress Rule (G-NSR, for short). Since there is only one primary stress per sentence, only the directly governed complement gets the nuclear stress; the second constituent after the verb (or the complex verb [V+C], etc.) is not allowed due to the lack of a proper stress in the sentence.

According to the G-NSR, the monosyllabic directional noun in (18b) will be analyzed as not being heavy enough to realize the Nuclear Stress (NS) assigned by the verb at the end of the sentence, thus a locator is naturally used to fulfill the disyllabicity requirement, otherwise, the sentence would be prosodically ungrammatical (or ineffable).

Under this analysis, we can now explain why there is a complementary distribution between monosyllabic localizers and disyllabic localizers in terms of predicate and non-predicate positions, as seen in (10), repeated here as (20).
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overrides the Nuclear Stress assigned only to the complement of the verb postverbally (in a rhetorically stress-neutral situation), and thus, only G-Based NS positions (postverb) are prosodically heavy.5

Not only can the grammatical contrast between monosyllabic localizers and disyllabic localizers in Modern and Medieval Chinese be explained naturally based on the theory presented here, but also the monosyllabic non-locative nouns can be explained systematically as well. As seen before, unlike Archaic Chinese, Medieval and Modern Chinese grammar do not allow monosyllabic nouns to be used for location-denoting purposes even if they appear in preverbal position. For example (taken from Sun 2008):

(22) a. Tā xiǎo huān zài shān *shān gàn rì chā
he like at mountain top see sun out.
‘He likes to watch sunrise on a mountain.’

b. Tā xiǎo huān zài gāo shān (shān gàn rì chā
he like at high mountain top see sun out
‘He likes to watch sunrise on a high mountain.’

How can we rule out sentences like (22a)? Based on Huang’s theory, we suggest the following three different operations.

(23)

It is obvious that the missing localizer can only be permitted either preverbally or within parallel sentences. This is so because contrastive stress or parallel prosody

5I would like to thank the anonymous reviewer for pointing out the overriding effect on NSR under contrastive and parallel prosody situations. In addition to this, it is also worthwhile to note that not only NSR but also disyllabic plays a crucial role in the grammaticality of the localizer omission, for example:

*Nǐ zài bènér xiē, wǒ zài shā shāng xiē
you on notebook write, I on book LC write
‘You write on a notebook, I write on book.’

This shows that place nouns must at least be disyllabic when the CL is missing, a prosodic constraint of disyllabcity.
As Huang pointed out, in Medieval Chinese, the Archaic covert null L feature was lost; however, as seen above, the medieval overt-L (the localizers) was most likely grammaticalized under a prosodic motivation. In the current analysis, it is highly plausible that prosody forced monosyllabic non-locative nouns to be combined with a monosyllabic locative word (shàng, xià, etc.) to fulfill the NSR (19) and/or Disyllabicity. Thus, only through such operations can the locative words be reanalyzed as occupying the L position, giving rise to a new functional category for the localizer.

4 Prosodically Motivated Light Verbs and Light Nouns in Medieval Chinese

The development of localizers is not a sporadic case of prosodically motivated syntax in Classical Chinese. As observed by Feng (2005), the null light verbs in Archaic Chinese were also phonetically realized under prosodic pressure in Medieval Chinese. For example (taken from Feng 2005):

(24) a. (颗)夜夢之曰...（余, 而所嫁婦人之父也） (左傳·宣公15年 Zuo Zhuang)  
Ke night dream it, say  
‘Ke dreamed of it in the night and said...’

b. (相如)與卓氏婚, 饒於財。 (史記·司馬相如列傳 Shiji)  
(Xiang Ru) yǔ Zhuó Shì hūn rào yú cái  
(Xiang Ru) and Zhuo Miss marry, rich at future  
(He) he had a dream that night when he saw someone coming.’

c. 無友不如己者。 (論語·學而 Lunyu)  
Wú yǒu bù rú jǐ zhě  
No friend no like self nom  
‘Do not make friends with those who are not as good as yourself.’

The words mèng ‘dream’, hūn ‘marriage’, and yǒu ‘friend’ are generally used as nouns while they also functioned as verbs taking an object in Archaic Chinese (Takashima 2005). It is assumed that there was a covert light verb DO used in Archaic Chinese (Feng 2005) and only around the time of the Eastern Han (200 AD) did phonetically realized light verbs such as zuò 作 ‘do’, qǐ 起 ‘up’, xíng 興 ‘appear’ start to appear. For example:

Why did overt light verbs suddenly appear in the language after the Han? The emergence of overt light verbs in the history of Chinese syntax is a mystery not solved until Xu (2006) Hu (2005) and Feng (2005). However, disyllabic verbal expressions are expected to be favored under the NSR (19), which can be satisfied by any syntactic means. Thus, all overt light-verb expressions, as seen in (25), are located within the NS domain. In fact, making the archaic covert light verbs overt was merely one of many syntactic strategies activated under the prosodic grammar during the Late Medieval Chinese (see Feng 2011 for more prosodic effects on syntax). The historical change of light verbs (from covert to overt) can be seen even more clearly in the examples given in (26).

(26) a. 不鼓自鳴 (佛本行集經·卷 2 Fo Benhang Jiijing)  
Bù gǔ zhì míng  
Not drum and sound  
‘No (one) drummed (beat) the drum but it sounds.

b.  

V'  
N  

Note that gu ‘drum’ does not stand as an disyllabic foot by itself in (26a), but it is combined with the negator bu to form a foot, where it undergone a syntactic denominalization warranted by prosody.
Examples given in (28) once again show that if the numeric element is monosyllabic, a light noun is favored, indicating that prosody may also have affected the development of classifiers in Classical Chinese (Feng 2011), which parallels the development of light verbs and localizers not only in terms of movement lost (Huang 2009, 2013), but also in terms of chronological parallelism (Pan 1982; Shimura 1995; Wu 2003; Feng et al. 2008).

5 Conclusion and Final Remarks

In this paper, I have adopted Huang’s (2009) syntactic and Sun’s (2008) prosodic analyses for Chinese localizers in classical and modern Chinese. I have attempted to show that the typological change of Classical Chinese from synthetic to analytic can be characterized in terms of syntax (i.e., losing movement) motivated by prosody (the Nuclear Stress Rule and the disyllabic requirements).

Under the system of prosodic grammar proposed here, the scenario of localizer development is different from previous studies. First, under the current theory, prior to the [+strong] feature of the null L being lost in Archaic Chinese, pre-localizer xià, shàng, lì, etc., were used to fulfill the disyllabic requirement for monosyllabic nouns (whether intrinsically locational or not) through disyllabic or in the Nuclear-Stress positions. When more and more shàng, xià elements were used as prosodic place-holders for location-denoting nouns in Medieval Chinese, the pre-localizers (xià, shàng, lì, etc.) were reanalyzed as lexical heads in the ‘L’ position of (7). Only then were true localizers born, giving rise to the surface structure of dà shì xià ‘under a big tree’ (5). The difference between Archaic and Medieval (including Modern) Chinese is therefore not simply a loss of the null localizer (i.e., the strong functional feature), but instead the [+L] feature was inherited by (1) a disyllabic place name in non-NS positions and (2) is replaced by a new category of localizer especially in NS positions.

In fact, the prosodic hypothesis given here is not limited to localizer development (Behr 2010; Redouane 2007). The prosodic phenomena among the three functional categories, namely light verbs, classifiers and localizers discussed in this and other papers (Feng 2005, 2012) were all newly created syntactic structures during the typological change from Old Chinese to Medieval Chinese, and each of them requires a systematic and unique analysis in terms of prosodic syntax that activates relevant parametric factors and motivates grammaticalization in the history of Chinese, a fascinating new area for linguistic studies.

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