

Activation of Weak Grammatical Feature and Its Activator

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ABSTRACT. *This paper argues that most object/human-denoting nominals, whether N, NP or pronoun, have a weak grammatical feature [+Lw] ('weak locative'), and that the feature needs to be activated properly in order to induce its syntactic effects. The feature is activated through different mechanisms in different languages. Along this line of approach, the widely observed construction of 'nominal + place word' in the modern Chinese language such as *zhuozi pang* 'table side' and *Lao Wang zher* 'Lao Wang here' is re-cast and re-captured as a consequence of weak feature activation.*

Keywords: weak feature; activation; nominal; localizer

1. **Introduction.** Under a formal paradigm of generative grammar, every speaker has a mental lexicon that stores lexical knowledge like an e-dictionary. Each lexical item holds an array of phonetic, semantic and grammatical features in the lexicon. Those features differ in strength and exhibit different behaviors in syntactic operations. While weak features are often suppressed and remain dormant until activated by certain linguistic mechanisms, strong features display their effects automatically in a variety of ways. This paper explores how weak features, especially the weak grammatical feature [+Lw] ('weak locative'), are activated by examining relevant characteristics of noun, noun phrase or

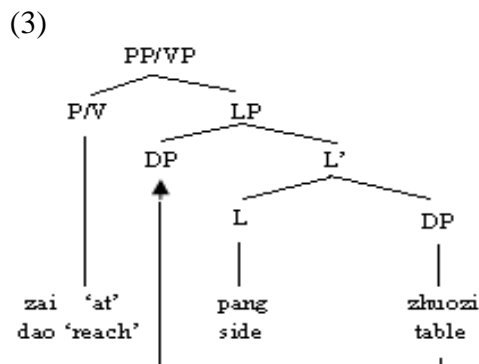
pronoun denoting human being or object in certain grammatical contexts.

Since nouns and pronouns usually denote human beings or objects, they are likely to have [+HUMAN] or [+OBJECT] as strong features. As these features enter syntactic operations, they are accessible and often induce syntactic operations. However, some nouns and pronouns have [+Lw] (locative) as a weak feature that is dormant, and thus must be activated to induce syntactic operations. For example, some verbs and prepositions in Chinese that select locations as their complements require their non-locative complements to take a localizer, such as *pang* ‘side’, *li* ‘interior’, *wai* ‘exterior’, *shang* ‘top’, *xia* ‘bottom’, *qian* ‘front’ and *hou* ‘back’, as in (1) and (2) below.

- (1) *dao zhuozi-pang*
 reach table side
 ‘come to the table’
- (2) *zai shu-xia*
 at tree bottom
 ‘under the tree’

This type of construction has been noted and discussed in a number of works, including Liu^[1,2], Chu^[3], Chappell and Peyraube^[4], Huang^[5], Li^[6], Zhang^[7], and Zhang and Xu^[8] among others. We propose that the main function of localizers used above is to activate the weak feature [+Lw] of nouns or pronouns. Furthermore, it will also be argued that comparable nouns or pronouns in languages like English also have the weak feature [+Lw], but this very same weak feature in English is activated in a different way from Chinese.

2. Locative Clitic as Activator for the Activation of Feature [+Lw]. Huang^[5] analyses localizers *pang* ‘side’ in Chinese as light nouns, arguing that all location-selecting verbs and prepositions (heads) categorically select an LP as their complement, whereas L (localizer) is a relational head noun that selects a DP as its complement. Huang also argues that a non-locative DP (e.g., *zhuozi* ‘table’) is required by the location-selecting heads to take a localizer. The structure of *zai/dao zhuozi-pang* ‘at/reach table’s side’ is thus analyzed as in (3) below, whereby the DP *zhuozi* ‘table’ is moved to Spec of LP for Case, yielding *zai zhuozi-pang* ‘at table’s side’, or *dao zhuozi-pang* ‘reach the table’s side’.



This is a very insightful proposal. However, there are some points that deserve further consideration. First, why could *zhuozi* ‘table’ be assigned Case in the Spec of LP? Which category is the Case-assigner? Second, if preposition *zai* ‘at’ and verb *dao* ‘reach’ are Case-assigners, how does the Case assignment works? Why can they only assign Case to a part of their complement? Why cannot *zhuozi* ‘table’ get Case in situ? Third, Why do the following NPs without location-selecting verbs or prepositions nevertheless still need a localizer of the very same type?

- (4) Zhuxitai-shang hen duo ren.
Chairman table-top very many people
‘There are many people at the chairman’s table.’
- (5) Zhuozi-shang shi yi-ge lanqiu.
Desk -top is one- CL basketball¹
‘There is a basketball on the desk.’
- (6) Ta shou-shang you yi-ge xiao niao.
she hand top has one-CL small bird
‘She has a small bird in her hand.’

Given the above consideration, we would like to propose an alternative analysis of the phenomenon: *Pang* ‘side’ is a clitic, and its function is to activate the weak feature [+Lw] of *zhuozi* ‘table’. *Zhuozi* ‘table’ and *pang* ‘side’ form a syntactic constituent, receiving Case assignment from the preposition/verb ‘*zai/dao*’. As noted in Liu ^[2], although localizers are not required semantically in Modern Chinese, they are needed syntactically. For example, *zai chuang-shang zuo* ‘on bed top sit’ (sit on the bed) becomes incorrect if *shang* ‘top’ is deleted. Although *shang* ‘top’ is very much redundant semantically, **zai chuang zuo* ‘on bed sit’ is unacceptable. Furthermore, there is no difference in meaning between *na zai shou-li/shang/zhong* ‘hold at hand in/top/ middle’ (hold something in the hand), those localizers cannot be deleted. **Na zai shou* ‘hold at hand’ is ill-formed. In our opinion, for both *chuang* ‘bed’ and *shou* ‘hand’, [+Lw] is a weak feature that must be activated by localizers in order to be displayed in the syntactic structure, so localizers are syntactically obligatory.

As for sentences in (4)-(6) where there is NO location-selecting verb and preposition immediately preceding the phrase ‘noun + localizer’ but the localizer still has to be used obligatorily, an explanation along our weak feature activation approach is naturally available: The weak grammatical feature [+Lw] has to be activated whenever the feature needs to be active. The activation has to be done for various reasons. Satisfying the categorical selection requirement on their complement by location-selecting verbs and prepositions is merely one of many possible motivations for such an activation. In cases like that of (4)-(6) their sentence- initial subject position is required to take an NP with its locative feature being active, a localizer has to be used to activate the weak feature of the NP.

¹ ‘CL’ here stands for ‘classifier’ which is commonly used between numerals and nouns in Chinese.

Huang^[5] also notes that the structural particle *de* cannot be inserted between *zhuozi* ‘table’ and *pang* ‘side’, hence (7) below is not acceptable.

- (7) **zhuozi de pang*
 Table DE side
 ‘table’s side’

Huang^[5] argues that monosyllabic localizers (e.g., *pang* ‘side’) are phonetically defective and must cliticize to the immediately preceding category. Since *de* is itself a clitic, it cannot serve as a host for another clitic and co-occur with the monosyllabic localizer. However, Li^[6] has shown that clitics can co-occur in Chinese, as illustrated in (8) and (9) below (clitics are underlined).

- (8) Zuo- wan ti le de jiu keyi likai le.
 do-finish homework AP² DE then may leave SFP³
 ‘Those that have finished the homework may leave.’
- (9) Ta zheng wushui ne ba?
 he right-now nap SFP SFP
 ‘He is taking a nap right now, isn’t he?’

Note that the above sentences in which two clitics co-occur in sequence are possible not because one of the two clitics serves as a host to another. Rather, the inner clitic such as *ne* in (9) cliticizes to the immediately preceding category such as *ta zheng wushui*, forming a larger syntactic unit *ta zheng wushui ne* first, then the outer clitic *ba* comes in later to join the newly formed larger unit. So it is logically possible that *de* in (7) first cliticizes to *zhuozi* ‘table’, forming *zhuozi de*, then *pang* as a second clitic joins the newly formed unit to give rise to *zhuozi de pang*.

There thus seems to be a contradiction: Clitics may co-occur in Chinese at least in linear order on the one hand, yet sentence or phrase like (7) above is not acceptable on the other. If our above analysis may work out, such a contradiction would be resolved. The activation of weak feature must be subject to an adjacency condition, thus if *de* is inserted between *zhuozi* ‘table’ and *pang* ‘side’, they are not adjacent to each other and *pang* ‘side’ cannot activate the weak feature [+Lw] of *zhuozi* ‘table’, thus the unacceptability of **zhuozi de pang* ‘table’s side’ is explained on a minimal and natural assumption. More importantly, the adjacency condition is not proposed as an ad-hoc condition just for the activation of weak feature by a clitic like *de*, it applies generally to all types of weak feature activation by any kind of activator. We will return to the issue later in this article.

In Modern Chinese, there are also disyllabic localizers such as *pang-bian* ‘side’, *li-bian* ‘interior’, *wai-bian* ‘exterior’, *shang-bian* ‘top’, *xia-bian* ‘bottom’, *qian-bian* ‘front’ and *hou-bian* ‘back’, they are similar with the corresponding monosyllabic localizers in

2 ‘AP’ stands for ‘Aspect Particle’

3 ‘SFP’ stands for ‘sentence final particle’.

semantic, but they have obvious differences in syntactic behaviors. Disyllabic localizers may also be attached to nouns or pronouns as seen in the following examples.

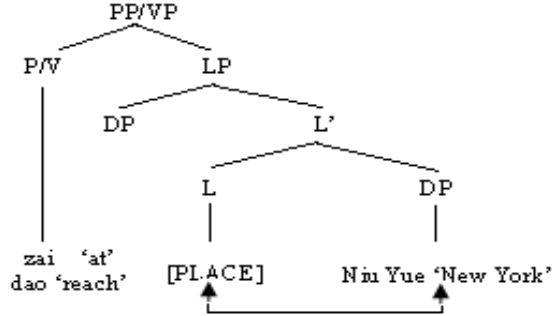
- (10) Zai / dao zhuozi pang-bian
 at / reach table side
 ‘at / come to the table’
- (11) Zai / dao wo pang-bian
 at / reach my side
 ‘beside / come to me’

The construction of *zhuozi-pang* ‘table side’, as argued above, is an instantiation of a weak feature activation by the clitic *pang*. Because of the adjacency condition, *de* cannot be inserted between *zhuozi* ‘table’ and *pang* ‘side’. Contrastively, *zhuozi pang-bian* ‘table’s side’ is a modifier-head phrase in which *pang-bian* ‘side’ serves as a head noun rather than as an activator of weak feature, thus the adjacency condition on feature activation does not apply here, *de* can be inserted, resulting in a well formed construction *zhuozi de pang-bian* ‘table’s side’. In other words, *De* is optional in this case. Regardless of whether *de* is inserted or not, the modifier-head relationship between *zhuozi* ‘table’ and *pang-bian* ‘side’ remains unchanged. Monosyllabic and disyllabic localizers exhibit different behaviors consistently. For instance, monosyllabic localizers cannot be used independently and must cliticize to the immediately preceding category whereas disyllabic localizers may serve as a subject, an object or a modifier independently, like other normal place-denoting nouns such as *fujin* ‘vicinity’ as illustrated respectively in (12), (13) and (14) below.

- (12) Pangbian (fujin, *pang) shi yi-jia canguan.
 side (vicinity, *side) is one-CL restaurant.
 ‘There is a restaurant nearby.’
- (13) Jingcha jiu zai pang-bian (fujin, *pang) .
 police just at side (vicinity, *side)
 ‘A policeman is just at the side.’
- (14) Wang Lin kan-le yiyan pang-bian (fujin, *pang) de ren.
 Wang Lin glance - ASP once side (vicinity, *side) DE people
 ‘Wang Lin glanced once at the people around (him).’

3. Nominal with Strong Locative Feature [+Ls]. It is pointed out in Chappell and Peyraube^[4] that place names or geographical locations such as *Zhongguo* ‘China’ and *Bali* ‘Paris’, may serve as objects of verbs or prepositions of place or movement directly. Huang^[5] notes that place names are inherent location-denoting DPs, which are selected by a null L with the elementary semantics of PLACE. The structure of *zai/dao Niuyue* ‘at/reach New York’ is given as in (15) below:

(15)



Huang ^[5] points out that *Niu Yue* 'New York' is a location-denoting DP that contains an interpretable feature [+L], and the null L renders its [+L] feature uninterpretable. L can inherit its interpretable feature from the goal *Niu Yue* 'New York' by the Agree relation to satisfy the selectional requirement of the higher head P/V. On the contrary, a non-locative DP like *Zhangsan* (name) does not carry an interpretable feature [+L], and thus the null L cannot inherit an interpretable [+L] from *Zhangsan*, so **zai/dao Zhangsan* 'at/reach Zhangsan' is unacceptable in Mandarin.

It needs to be noted that the issue is not why place names or geographical locations such as *Zhongguo* 'China' and *Bali* 'Paris' don't require a localizer, rather it is why they simply cannot take such a localizer as seen in the following two sentences.

(16) *Make *zai Zhongguo li xue hanyu*.
Mark at China inside study Chinese
Intended Meaning: 'Mark studies Chinese in China.'

(17) *Lao Wang *zai Bali li zuo shengyi*.
Lao Wang at Paris inside do business
Intended Meaning: 'Lao Wang does business in Paris.'

We would further propose that place names like *Zhongguo* 'China' hold the strong feature [+Ls] in the lexicon. Since it is a strong feature, it does not need to be activated and may display in the syntactic structure unconditionally, rendering phrases like *zai/dao Zhongguo* 'at/reach China' grammatical without overt localizers. Perhaps for the sake of redundancy avoiding, localizers cannot cliticize to nominals with inherently integrated strong feature [+Ls]. In contrast, ordinary and non-place names like *Zhangsan* have the weak feature [+Lw], which is often suppressed and remains in a dormant state, thus requiring activation to display in the syntactic structure. Consequently, we can say *zai/dao Zhangsan zheer/naer* 'at/reach Zhangsan here/there', but cannot say **zai/dao Zhangsan* 'at/reach Zhangsan'. The sentence can be grammatically acceptable only if there are demonstratives such as *zheer* 'here' or *naer* 'there' to be grammatically acceptable. In this instance, the use of the localizer is just one of two major strategies of weak feature activation.

4. **Nominal without Locative Feature [-L].** Even more interestingly, there are some nominals which don't have the grammatical feature of [+L] at all, neither weaker feature [+Lw] nor strong feature [+Ls]. In other words, they carry the grammatical feature [-L]. For instance, *suishu* 'age', *fushu* 'negative number', *dunwei* 'tonnage', *wuxing* 'imagination', *meili* 'charm', and *mingsheng* 'reputation' are all such nominals. Since they don't have the feature [+L] in the first place, locative clitics, understandably, cannot be used to activate the feature.

- (18) *Suishu-li
Age in
- (19) *Fushu-shang
Negative number top
- (20) *Dunwei-pang
Tonnage side

Quite obviously, the above nominals marked the feature [-L] are all so-called 'abstract nouns' in semantics. They are 'abstract' in the sense that they denote abstract things which don't take a location or a space, thus their locative feature is inherently minus. This is the case not only in the Chinese language, it is perhaps applicable in all human natural languages.

Given the forgoing discussion, we now can make a generalization about the typology of nominals in terms of the locative feature as in the table below, and their reactions to feature activation are also completely different.

Types of Nominals	Examples of Nominals	Reaction to Locative Feature Activation
Nominals with Strong Locative Feature [+Ls]	<i>Beijing</i> , <i>Niuyue</i> 'New York', <i>jiaoqu</i> 'suburb', <i>dangdi</i> 'local place',	Feature [+Ls] is strong and active, thus it does not need to be activated.
Nominals with Weak Locative Feature [+Lw]	<i>shuzhuo</i> 'desk', <i>yizi</i> 'chair', <i>chuang</i> 'bed', <i>zhuxitai</i> 'chair table',	Feature [+Lw] is weak, thus it needs to be activated otherwise it will remain inactive.
Nominals with No Locative Feature [-L]	<i>Suishu</i> 'age', <i>fushu</i> 'negative number', <i>dunwei</i> 'tonnage',	Feature [-L] cannot be activated regardless of how activation works.

5. **Locative Demonstrative as Alternative Activator for the Activation of Feature [+Lw].** As it is noted above, demonstratives such as *zheer* 'here' and *naer* 'there' in Chinese may work as alternative activators to activate the weak feature [+Lw]. First, it is necessary to note that the primary function of *zheer* 'here' / *naer* 'there' in the language is to denote places as seen in (21)-(22) below.

- (21) Zheer hen liangkuai.
 here very cool
 ‘It is very cool here.’
- (22) Ta zhan zai naer.
 he stand at there
 ‘He stands over there.’

We note that *zheer* ‘here’/*naer* ‘there’ may also be modified by a noun or a pronoun, giving rise to phrases such as *wo zheer* ‘I here’ and *Lao Wang naer* ‘Lao Wang there’. Let us consider some examples as follows.

- (23) Wo zai Lao Wang zheer.
 I at Lao Wang here
 Intended Meaning ‘I am here at Lao Wang’s place.’
- (24) Ta zhan zai qiche naer.
 he stand at car there
 Intended Meaning ‘He stands by the car.’

In the above examples, *Lao Wang zheer* ‘Lao Wang here’, and *qiche naer* ‘car there’ all denote locations of *Lao Wang*, and *qiche* ‘car’ respectively.

Lü^[9] notes that *zheer* ‘here’/*naer* ‘there’ may follow a human/thing -denoting noun or pronoun, and turn it into a location-denoting expression, and that the function of *zheer* ‘here’/*naer* ‘there’ is to transform non-location-denoting expressions into location-denoting ones. However, not all human/thing-denoting nouns or pronouns may be transformed into location-denoting expressions by attaching *zheer* ‘here’/*naer* ‘there’ after them. Some abstract nominals such as *suishu* ‘age’, *fushu* ‘negative number’, *dunwei* ‘tonnage’, which are considered lacking the locative feature, denote intangible things and have no specific locations, thus cannot be transformed to denote places even if *zheer* ‘here’/*naer* ‘there’ are attached. If and only if a nominal has the feature [+Lw], may it co-occur with *zheer* ‘here’/*naer* ‘there’ to satisfy various syntactic requirements in given contexts.

- (25) *Suishu zheer
 Age here
- (26) *Fushu naer
 Negative number there
- (27) *Dunwei zheer
 Tonnage here

Zheer ‘here’/*naer* ‘there’ in these constructions thus also serve as activators on a par with locative clitics discussed, which function to activate the weak feature of [+Lw] in languages like Chinese. *Zheer* ‘here’/*naer* ‘there’ as activators, just like locative clitics, may only activate the weak feature [+Lw] of nominals; it cannot assign the feature [+Lw] to nominals that don’t carry this feature in the first place. Furthermore, very much like the feature activation by locative clitic, the activation by locative demonstrative is also subject

to the adjacency condition on the activator and the activated, *de* and the like cannot be inserted between a nominal and a locative demonstrative.

- (23') *Wo zai Lao Wang DE zheer.
I at Lao Wang DE here
Intended Meaning 'I am here at Lao Wang's place.'
- (24') *Ta zhan zai qiche DE naer.
he stand at car DE there
Intended Meaning 'He stands by the car.'

However, there seems to be an important contrast between locative clitic and demonstrative. As exemplified by ungrammatical sentences in (16) and (17) above, a locative clitic like *li* 'inside' cannot cliticize to a nominal with the strong locative feature [+Ls] since the strong feature is already active in the first place, further activation is unnecessary thus should be avoided. But in contrast locative demonstratives *zheer* 'here' and *naer* 'there' can be used right after those nominals as in (16') and (17') below.

- (16') Make zai Zhongguo zheer xuehanyu.
Mark at China here study Chinese
Intended Meaning: 'Mark studies Chinese here in China.'
- (17') Lao Wang zai Bali near zuo shengyi.
Lao Wang at Paris there do business
Intended Meaning: 'Lao Wang does business there in Paris.'

Under further investigation, this kind of phenomenon, however, would not constitute a counter example to our generalization. Demonstratives *zheer* 'here' and *naer* 'there' in (16') and (17'), unlike that in (16) and (17), are normal demonstrative rather than feature activator. *Zheer* 'here' and *naer* 'there' in (16') and (17'), very much like their counterparts in English, are used in these two sentences just to specify the space relationship between the speaker and a certain geographical location. Where *zheer* 'here' is used, it means that the speaker is right in the location, and when *naer* 'there' is chosen, it means that speaker is not in the location.

6. Null Activator for Feature Activation in English. Human/thing-denoting nominals also have the weak feature of locative [+Lw] in English. However, as a sharp contrast between Chinese and English, the activation of this feature does not take an insertion of a localizer clitic or a locative demonstrative. Rather, as seen in the following sentences, the feature is activated as long as an appropriate context is provided.

- (28) I have borrowed some books from a friend.
(29) You are welcome to come over to us.
(30) If you wait long enough, everything comes to you.

The data suggests an approximate solution to the problem: While overt and lexical

activation of weak locative feature either by a locative clitic or a locative demonstrative is necessary in Chinese, an appropriate grammatical context itself is enough to activate the weak feature [+Lw] in English. The feature activating grammatical context may arguably constitutes a null activator in English which carries on a covert activation process in the language. And, this cross-linguistic contrast may possibly be attributed in turn to the analytic- / synthetic- language parameter argued convincingly in the works of Huang (Huang 2015 among others)^[10]. Needless to say, more detailed research works need to be done in this area.

7. Conclusion. This article argues that some nominals (nouns and pronouns) have a weak locative features [+Lw] in addition to their strong features such as [+HUMAN] and [+OBJECT]. And, this weak feature, unlike strong grammatical features, is often suppressed and remain dormant unless activated specifically to induce corresponding syntactic operations. Cross-linguistically, there are at least two major strategies to activate this weak feature and the like: overt activation by grammatical elements such as localizer clitic and locative demonstrative in Chinese, and covert activation in appropriate syntactic context in English. Different languages make use of different strategies as activation mechanism. It is speculated that this cross-linguistic contrast could be explained as an effect of the widely applicable the analytic- / synthetic- language parameter.

It has been argued in this article that a categorical typology of nominals could be established as if nominals have the locative feature, and how strong the feature is if they do have the feature. There are three types of nominals and these three types of nominals react to feature activation differently: Nominals with the strong local feature [+Ls] do not need to have the feature activated to avoid redundancy; nominals with the weak locative feature do have to have their feature activated, and nominals without locative feature simply cannot obtain the feature regardless of how an activation mechanism is deployed. The activation of the locative feature by an overt grammatical element, being it either a locative clitic or a locative demonstrative, is subject to the adjacency condition. Other syntactic elements (including the particle *de*) cannot be inserted between the activator and the activated.

Under this analysis, the construction of ‘nominal + place word (locative clitic/demonstrative)’ widely observed in Chinese is re-cast as an instantiation of weak feature activation and thus explained in a principled way.

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