

## The Optional Preposition in the TP Domain\*

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**Abstract:** In this paper, I examine the phenomenon of preposition optionality in spatial phrases in the TP domain in Mandarin Chinese and show that it cannot be explained under a Case approach. I propose instead that there are different domain distributions for spatial phrases and that the presence/absence of the preposition in spatial phrases in the TP domain is determined by the definiteness and animacy properties of the following NP, reminiscent of differential object marking in other languages. The current investigation thus enables us to consider DOM in Mandarin Chinese as a domain phenomenon which is related to internal topicalization and information structure.

### 1. Introduction

In this paper, I discuss the interesting phenomenon of optional prepositions in spatial phrases in the TP domain in Mandarin Chinese. A typical spatial phrase in Chinese is usually made up of three components. As shown in (1), the first component of the spatial phrase is a preposition - in this case, *zai* ('in'), followed by an NP, the second component.

- (1)            Zhangsan [zai fanjian li]        kan dianshi.  
              Zhangsan    in    room    inside    see    television  
              *'Zhangsan watched TV in the room.'*

The last component, which here is *li* ('inside'), is more controversial. In the literature, it has been proposed to be a postposition (Ernst 1988), a clitic (Liu 1998), and a deviated noun (Huang, Li

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and Li 2009). The status of the third component will not be discussed in this paper since I will only focus on the presence/absence of the preposition *zai* ('in') in spatial phrases.

Djamouri et al. (2013) and Paul (2015) observe that spatial phrases in Chinese can appear in the internal topic position without a preceding preposition *zai* ('in'), as in (2a). Paul (2005) argues that the internal topic position is within the TP domain. Note that the negation *bu* ('not') and the modal *neng* ('can') in both sentences mark the vP boundary. On the other hand, if spatial phrases appear in the VP-adjoined position, a preposition is obligatory, as in (2b).

- (2) a. Ni (zai) [woshi li] bu neng fang dianlu.  
 you at bedroom inside not can put electric.stove  
*'You cannot put an electric stove in the bedroom.'*
- b. Ni bu neng [\* (zai) woshi li] fang dianlu.  
 you not can at bedroom inside put electric.stove

However, this restriction is not observed in temporal phrases, which may appear in the internal topic position or the VP-adjoined position without a preposition. As shown in (3), the preposition *zai* ('in') can simply be omitted in temporal phrases, no matter whether in the TP or the VP domains.

- (3) Ta [(zai) chuxi yiqian] yao [(zai) chuxi yiqian]  
 he at New.Year's.Eve before want at New.Year's.Eve before  
 hui-jia.  
 return-home  
*'He will go home before New Year's Eve.'*

For the above contrast, Paul proposes that the spatial PP in (2a) is subcategorized by the verb *fang* ('put'). Hence, its Case is checked within the VP and later undergoes A'-movement to the TP-internal topic position. As for (2b), the spatial PP is assumed to be base-generated at the VP-adjoined position, where its Case cannot be checked/valued. A preposition is therefore required to check the Case of the locative PP in (2b). According to Paul, the temporal phrase in (3) is not subcategorized by the verb but rather is base-generated at the VP-adjoined position and takes inherent Case (i.e. Larson 1985). Later it may move to the internal topic position.

In the following discussion, I argue that the above explanation of preposition optionality does not seem to account for additional spatial phrase data and that a new proposal is needed to accommodate all the relevant phenomena. This paper is organized as follows: In Section 2, I present spatial phrase examples that appear incompatible with Paul's (2015) account, motivating the need to look for a different proposal. In Sections 3 and 4, the two parts of my proposal are

presented. In Section 3, I discuss the syntactic domains of prepositional phrases in Mandarin Chinese. In Section 4, I propose that optionality of the preposition *zai* ('in') is part of the differential object marking phenomenon observable in the TP/*v*P domain in Mandarin Chinese. I conclude the paper in the last section.

## 2. The Puzzles

In this section, I will present several examples that seem to be problematic under the Case explanation of Paul (2015).

Recall that in example (2) the verb *fang* ('put') is a three-argument verb. Hence, according to Paul (2015), it is possible that the verb can subcategorize for a spatial phrase, whose Case can be checked/valued without a preposition. However, this explanation encounters difficulty in example (4) below. In (4), the verb *chi* ('eat') is a transitive verb and does not subcategorize for a spatial PP. Following Paul's reasoning, this implies that the Case of the spatial PP cannot be checked/valued. But the spatial PP in (4) shows exactly the same pattern as that observed in example (2). This comparison strongly suggests that the presence of the obligatory preposition *zai* ('at') in the VP domain is not Case-determined, and that the absence of the preposition in the TP domain is not because the Case of the spatial phrase is checked/valued.

- (4) a. Xuesheng-men [(zai) jiaoshi li] bu neng chi dongxi.  
 student-PLU at classroom inside not can eat thing  
*'Students are not allowed to eat anything in the classroom.'*
- b. Xuesheng-men bu neng [\*(zai) jiaoshi li] chi dongxi.  
 student-PLU not can at classroom inside eat thing

Moreover, if we frame the spatial phrase in (4) as a question, the data in (5) indicates that, somehow, the preposition in the TP domain has become obligatory.

- (5) a. Xuesheng-men [\*(zai) sheme difang] bu neng chi dongxi?  
 student-PLU at what place not can eat thing  
*'Where are students not allowed to eat?'*
- b. Xuesheng-men bu neng [\*(zai) sheme difang] chi dongxi?  
 student-PLU not can at what place eat thing

Although for temporal phrases, the preposition still remains optional when the temporal NP becomes a *wh*-phrase, as shown in (6).

- (6) Ta [(zai) sheme shihou] yao [(zai) sheme shihou] hui-jia?  
 he at what time will at what time return-home  
*'When will he return home?'*

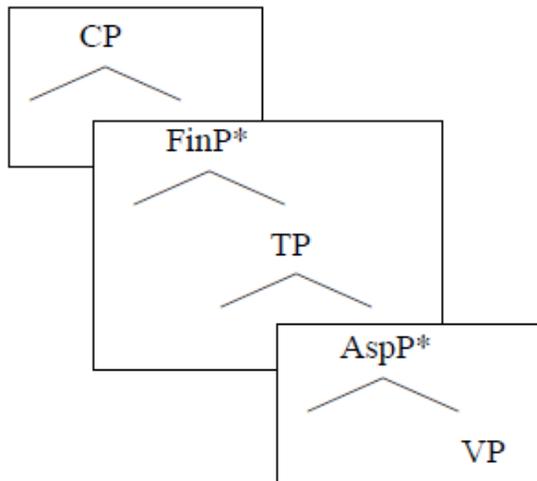
The examples above are puzzling under Paul's (2015) Case proposal. In the following section, I offer an alternative account.

### 3. The Proposal

#### 3.1. The Domains

Recall from Section 1 that Paul's explanation for the optional preposition in the spatial phrase in the TP domain is essentially a Case-based movement analysis. Instead of the movement analysis, I would like to propose that spatial NPs/PPs in Mandarin Chinese can be base-generated in the TP and the VP domains. This proposal is inspired by the Sortal Domain proposal by Ramchand and Svenonius (2014). As shown in (7) from top down, there are three different syntactic domains - the proposition domain, situation domain, and the event domain. Here we focus on the lower two domains, which essentially correspond to the TP and VP domains, respectively.

- (7) The Sortal Domain



Takamine (2017) adopts the idea of Sortal Domain in her investigation of modifier PPs in Japanese. As shown in (8) and (9), modifier PPs in Japanese appear in the situation domain and the event domain. For Japanese, the cut-off point between these two domains is argued to lie between Voice and Asp1 and is labelled Asp\*. Interestingly, we can see that in (8), the temporal PP and the locative PP can appear in both domains, whereas other PPs can only appear in the lower

event domain.

(8) [Situation domain ... Temp, Loc ... [Event domain ... Loc, Com, Src<sub>C</sub>, Rsn Inst/Means, Src<sub>P</sub> Goal, Mat, Man]]

(9) [Asp1 [Situation domain] [Asp\* transition] [Voice [v [Asp2 [V [Res ]]]]]] [Event domain]

Now let us turn to PPs in Mandarin Chinese. They seem to behave like Japanese PPs with respect to their syntactic locations. For example, while other PPs, such as the path PP in (10) or the commitative PP in (11), are restricted to the VP domain (see also Paris 1979), spatial PPs in Chinese can appear in both the TP and VP domains, as observed in (4) previously.

(10) Zhangsan (\*cong yinhang) bu neng (cong yinhang) jie qian.  
 Zhangsan from bank not can from bank borrow money  
*'Zhangsan cannot borrow money from the bank.'*

(11) Zhangsan (\*gen Lisi) bu neng (gen Lisi) yiqi zuo che.  
 Zhangsan with Lisi not can with Lisi together take car  
*'Zhangsan cannot take the car with Lisi together.'*

Moreover, since spatial phrases in Chinese can appear in both domains, then it should also follow that two spatial PPs in different domains can co-occur in the same sentence. This prediction is borne out in example (12).

(12) Xuesheng-men [zai jaoshi li] bu neng  
 student-PLU in classroom inside not can  
 [zai zuozi shang] tuya.  
 at table up scrawl  
*'Students cannot scrawl on the tables in the classroom.'*

Hence, the observation that spatial phrases in Chinese can appear in both the TP and VP domains of a single sentence additionally distinguishes them from other PPs, such as path PPs or commutative PPs.

### 3.2. DOM

After having shown in the previous section that spatial phrases can be base-generated in different syntactic domains, in this section, I examine the presence/absence of the preposition in spatial phrases. I propose that the presence/absence of the preposition *zai* ('at') is a kind of differential object marking of the variety discussed in the TP domain literature (e.g., Bossong 1985, Aissen 2003, Ilja and Witzlack-Makarevich 2018). Bárány & Kalin (forthcoming) suggest that Differential Object Marking [DOM] is a widespread linguistic phenomenon that (canonically) divides objects into two classes—a class that is overtly marked and a class that is not overtly marked (Comrie 1979, Croft 1988, Bossong 1991, Enç 1991, de Hoop 1996, Torrego 1998, Woolford 1999, Aissen 2003, de Swart 2007, Dalrymple & Nikolaeva 2011, ie.). Before turning to the discussion of 'zai' and spatial phrases, however, we will first consider some relevant properties of DOM and two illustrative examples in Chinese - the *Ba* construction and the internal topic construction.

DOM is usually triggered by the definiteness property and the animacy property of the following NP, as shown in (13) and (14).

(13)           Definiteness scale: Pronoun > Proper Noun > Definite NP > Indefinite Specific NP  
> Indefinite Non-specific NP

(14)           Animacy scale: Human > Animate > Inanimate

van Bergen (2006) and Yang and van Bergen (2007) have proposed that the Chinese *Ba* Construction exhibits the DOM phenomenon, so we will use it as our first illustrative example. The canonical word order of the *Ba* Construction is SVO, as shown in (15a). However, sometimes, in order to focus on the object NP, speakers using the *Ba* construction pre-pose the object NP to a preverbal position, as shown in (15b).

- (15) a.       Zhangsan   chi-wan-le       fan.  
          Zhangsan   eat-finish-ASP   rice  
          '*Zhangsan finished eating.*'
- b.       Zhangsan   ba   fan   chi-wan-le.  
          Zhangsan   BA   rice   eat-finish-ASP

The definiteness and the animacy properties of the *Ba* NP exhibit three patterns, exemplified in (16-18):

- (16) Geruisen \*(ba) [<sub>NP</sub> Sala] ai-de yao-si  
 Grissom BA Sara love-DE want-die  
*'Grissom loves Sara very much.'*  
*[Without ba: Only 'Sara loves Grissom very much.']*
- (17) \*Geruisen ba [<sub>NP</sub> yi-ge ren] ai-de yao-si  
 Grissom BA one-CL person love-DE want-die  
*'Grissom loves a person very much.'*
- (18) Geruisen (ba) [<sub>NP</sub> zhe-ben shu] ai-de yao-si  
 Grissom BA this-CL book love-DE want-die  
*'Grissom loves this book very much.'*

When the *Ba* NP is an animate NP, *Ba* cannot be omitted, as shown in (16). If the *Ba* NP is an indefinite non-specific NP, no matter if it is animate or inanimate, the sentence will be ungrammatical, as in (17). Finally, if the *Ba* NP is definite and inanimate, *Ba* becomes optional, as in (18). Note that while Li (2006) proposes that *Ba* is located in a *BaP* right above *vP*, Kuo (2010) argues that *Ba* is an overt realization of *v* head. Hence, arguably, *Ba* and the *Ba* NP are located in the *vP* domain.

Kuo (2016) has proposed that the DOM phenomenon can be found not only in the *vP* domain, but also in the TP domain in Chinese. The relevant kind of sentence typically contains an internal topic. The canonical SVO order in Chinese is repeated in (19a). As in the *Ba* construction, the object NP in the internal topic cases can also be preposed to a preverbal position, as shown in (19b). However, unlike the *Ba* NP, which has been argued to be located in the *vP* domain, the bare object NP now is located in the TP domain. Note that the negation in (19b) marks the *vP* periphery.

- (19) a. Zhangsan chi-wan-le fan. = (14a)  
 Zhangsan eat-finish-ASP rice  
*'Zhangsan finished eating.'*
- b. Zhangsan fan (mei) chi-wan-le.  
 Zhangsan rice not eat-finish-ASP

The definiteness and animacy patterns observed in the *Ba* construction can be observed in the internal topic cases as well. The canonical SVO order is shown in (20). If we prepose the animate object, as in (21), the preposition is obligatory. An indefinite non-specific animate NP is not

allowed, as shown in (22). Finally, a definite inanimate NP can be preceded by an optional preposition, as in (23).

(20) Zhangsan hen guan-xin Lisi.  
 Zhangsan very care Lisi  
*'Zhangsan cares Lisi a lot.'*

(21) Zhangsan \*(dui) Lisi hen guan-xin.  
 Zhangsan to Lisi very care  
*'Zhangsan cares Lisi a lot.'*

(22) \*Zhangsan dui yi-ge ren hen guan-xin.  
 Zhangsan to one-CL person very care  
*'Zhangsan cares a person a lot.'*

(23) Zhangsan (dui) zhe-jian shi hen guan-xin.  
 Zhangsan to this-CL matter very care  
*'Zhangsan cares this matter a lot.'*

Having observed the definiteness and animacy patterns in the *Ba* construction and internal topic cases, next we focus on spatial phrases in the TP domain. In examples (24) through (26), it is apparent that spatial phrases follow a similar DOM pattern. The animate NP requires an obligatory preposition in (24). An indefinite non-specific NP is not allowed in the TP domain in (25). Finally, a definite NP can be preceded by an optional preposition, as shown in (26). Recall that the negation and modal mark the vP periphery.

(24) Ni [\*(zai) Zhangsan lianshang] bu neng zhi hua hua,  
 you at Zhangsan face.up not can only draw flower  
 ye yao hua...  
 also want draw  
*'You cannot draw only flowers on Zhangsan's face, you also need to draw .....'*

(25) \*Ni [zai yi-jian woshi li] bu neng fang dianlu.  
 you at one-CL bedroom inside not can put electric.stove  
*'You cannot put an electric stove in a bedroom.'*

- (26) Ni [(zai) zhe-jian woshi li] bu neng fang dianlu.  
 you at this-CL bedroom inside not can put electric.stove  
*'You cannot put an electric stove in this bedroom.'*

The patterns of the *Ba* construction, internal topic cases, and the spatial phrases above are summarized in Table 1. All three essentially show the same patterns for the preposed object.

Table 1 The comparison

	<b>The <i>Ba</i> construction</b>	<b>Internal topics</b>	<b>Spatial phrases</b>
<b>Proper noun</b>	Obligatory	Obligatory	Obligatory
<b>Indefinite non-specific NP</b>	N/A	N/A	N/A
<b>Definite NP</b>	Optional	Optional	Optional

However, one major difference lies in the different location of the preposed objects. While the *Ba* construction is located in the *vP* domain, the internal topics and the spatial phrases are instead located in the TP domain. Another difference is the derivation of the internal topics. Recall that the spatial NP in the TP domain has been argued to be base-generated in the TsP domain. However, the preposed objects in the *Ba* construction and the internal topic cases have been argued to be derived by movement.

To summarize, the current proposal resorting to syntactic domain and DOM has the following advantages: First of all, we can explain the optional preposition in spatial phrases in the TP domain immediately. As shown in (27), if the *Ba* NP is a generic one, *Ba* is optional.

- (27) Zhangsan (ba) fan chi-wan-le.  
 Zhangsan BA rice eat-finish-ASP  
*'Zhangsan finished eating.'*

The relevant spatial phrase examples are repeated in (28) and (29). In examples (28a) and (29a), the spatial NPs are also generic NPs. Hence, it is expected that the preceding preposition is optional, and it does not matter whether the main verb is a ditransitive verb in (28) or a transitive verb in (29).

- (28) a. Ni (zai) [woshi li] bu neng fang dianlu.  
 you at bedroom inside not can put electric.stove  
*'You cannot put an electric stove in the bedroom.'*
- b. Ni bu neng [\*(zai) woshi li] fang dianlu.  
 you not can at bedroom inside put electric.stove
- (29) a. Xuesheng-men [(zai) jiaoshi li] bu neng chi dongxi.  
 student-PLU at classroom inside not can eat thing  
*'Students are not allowed to eat anything in the classroom.'*
- b. Xuesheng-men bu neng [\*(zai) jiaoshi li] chi dongxi.  
 student-PLU not can at classroom inside eat thing

Moreover, recall that the preposition in spatial phrases becomes obligatory when the spatial NP becomes an interrogative *wh*-phrase, repeated here as (30).

- (30) Xuesheng-men [\*(zai) sheme difang] bu neng chi dongxi?  
 student-PLU at what place not can eat thing  
*'Where are students not allowed to eat?'*

The interrogative *wh*-phrase is usually classified as a kind of pronoun. As shown in (31), if there is a personal pronoun, *Ba* is obligatory. If we frame the *Ba* NP as a question, as in (32), *BA* is also required. Therefore, it is also expected that the preposition is required in (30)

- (31) Zhangsan \*(ba) ta da-si-le.  
 Zhangsan BA he hit-die-ASP  
*'Zhangsan beat him to death.'*
- (32) Zhangsan \*(ba) sheme ren da-si-le?  
 Zhangsan BA what person hit-die-ASP  
*'What was beat to death by Zhangsan?'*

Finally, as we have seen, no matter whether derived or base-generated, preposed objects are located in the TP domain. This position is reminiscent of internal topics as proposed by Paul (2015), which are located in the TP domain. In addition, the internal topic, which is a kind of topic, is information structure-related. Hence the internal topic property of spatial phrases further links

the current differential marking phenomenon to information structure as discussed in Dalrymple & Nikolaeva (2011).

#### 4. Conclusion

In this paper, I have investigated the optionality of prepositions in spatial phrases in the TP-domain. Contrary to Djamouri et al. (2013) and Paul's (2015) Case and movement explanation, I propose that this particular phenomenon can be explained by domain distribution plus DOM in Mandarin Chinese. There are two different domain locations for spatial phrases. Moreover, the presence/absence of the preposition in the spatial phrases is sensitive to the properties of the following NPs. Finally, the differential locative marking described here extends the discussion of differential argument marking by Fauconnier (2011) for differential agent marking, Haspelmath (2007) for differential recipient marking, and Kittilä (2008) for differential goal marking.

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