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2 **Thing-place distinction and localizer** 3 4 **distribution in Chinese directed motion** 5 **construction** 6

7
8 **Abstract:** A language sensitive to a thing-place distinction (e.g., cup vs. Paris)
9 may use thing-to-place conversion devices to allow a thing to be conceptualized
10 as a place. Mandarin Chinese behaves inconsistently in the use of the conversion
11 device – the addition of a localizer (e.g., *li* ‘inside’) to a thing noun – in that the
12 device is not required in every situation where a thing is understood as a place, cf.
13 *dao chezi*-(*li*) arrive car-inside and *jin chezi*-(*li*) enter car-inside. Drawing evi-
14 dence from Chinese directed motion constructions, I argue that such inconsistency
15 is closely related to the other function of localizers: specifying the search domain
16 of a ground that a figure is located with respect to. Specifically, Chinese adheres
17 to a Localizer Condition according to which a localizer is not required if the infor-
18 mation conveyed in the path verb and the (thing) ground is sufficiently specific to
19 identify the figure’s final location with respect to the (thing) ground. I show that
20 the effects of the condition are observed in other languages such as Likpe and
21 French, despite differences in encoding spatial relations.

22 **Keywords:** thing-place distinction, Chinese localizer, directed motion construc-
23 tion
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29 30 31 **1 Introduction** 32

33 PLACE (or LOCATION in Stosic 2007) and THING (or OBJECT in Stosic 2007) are
34 recognized as two ontological categories (Jackendoff 1983; Lyons 1977; cf.
35 Choi-Jonin and Sarda 2007; Stosic 2007). Spatial regions that can locate things are
36 typically conceptualized as places (e.g., New York, China) (Lyons 1977; Jackendoff
37 1983). Things are physical objects, e.g., tree, table, that stand or move with re-
38 spect to one another (Jackendoff 1983, cf. Choi-Jonin and Sarda 2007). However, a
39 thing concept can be converted into a place concept. For instance, a table by itself
40 is a thing, but it can be conceptualized as a place if it is used as a support for other

things (e.g., plates, books). Languages vary in the degree of their sensitivity to the distinction between places and things. According to Taylor (1996), English nouns are not morphologically marked to distinguish a place from a thing. For instance, a house is understood as a thing and a place, respectively in (1a) and (1b), but the conceptual difference is not morphologically marked.¹

- (1) a. **The house** is beautiful.
 b. The cat entered **the house**.

In contrast, nouns denoting things in Zulu must be locativized so as to express a place meaning, as in (2) (Taylor 1996).

- (2) a. *ngena **indlu**
 enter house
 b. ngena **endlini**
 enter house-LOC
 'enter the house'
 (Taylor 1996: 295)

Languages such as Zulu that are sensitive to a place-thing distinction may adopt different devices to convert a thing into a place. For instance, Zulu uses an initial *e-/o-* and suffix *-(w)ini/- (w)eni* (Taylor 1996, cite from Doke 1981: 232–236), as in (2). But Yucateco, a language which is also highly sensitive to a place-thing distinction, must use the generic preposition *ti'* to shift a thing noun to a place noun (Bohnenmeyer and Báez 2008). As illustrated in (3), the thing noun *pàach* 'back (of the human body)' requires the presence of *ti'* in order to head the ground phrase.

- (3) *Te'l kul-ukbal u=pèek'il tu=pàach le=nah=o'*
 there sit-DIS(B3) A3=dog-REL PREP:A3=back.of.body DET=house=D2
 'There the dog is sitting outside the house.'
 (Bohnenmeyer and Báez 2008: 9)

¹ An anonymous reviewer points out that English does show some indications of the thing-place distinction, although the distinction is in a way different from the ones discussed in this paper. The reviewer provides two examples. First, English toponyms and places with specialized functions (e.g., school) display restrictions on the combination with definite marking: toponyms do not combine with *the* (**the China*), and *going to school* differs from *going to the school*. Second, English demonstrative system distinguishes things from places, e.g., *this/that* vs. *here/there*, and *what* vs. *where*. I am very grateful for the reviewer's observation.

1 However, if the head of a ground phrase is not a noun that denotes a concrete
 2 thing, but an abstract noun, e.g., *óok'ol* 'top', the preposition *tí* is not required, as
 3 in (4) (Bohnenmeyer and Báez 2008).

4

5 (4) *Le=lùuch=o' tí yàan y=óok'ol le=mesa=o'*
 6 DEF=cup=D2 there EXIST(B3SG) A3=top DET=table=D2
 7 'The cup, it's there on the table.'
 8 (Bohnenmeyer and Báez 2008: 8)

9

10 In this paper, I show that a language sensitive to a place-thing distinction may
 11 behave inconsistently in their use of thing-to-place conversion devices, by draw-
 12 ing evidence from expressions of directed motion events in Modern Mandarin
 13 Chinese (hereafter, Chinese). The term "directed motion event" refers to an event
 14 in which a moving object moves spontaneously (without an external cause) in a
 15 certain direction with respect to a reference object and ends up in a new location
 16 as a consequence of that event. The moving object and the reference object are
 17 called "figure" and "ground" (Talmy 2000: 25), respectively. I argue that lan-
 18 guages like Chinese show some sensitivity to a place-thing distinction. However,
 19 the conversion devices are not required in all cases. Rather, if a figure's location
 20 with respect to the thing is identifiable based on the information of a motion con-
 21 struction, then the thing is understood as a place without a conversion device. In
 22 the case of Chinese, a morphological marker does not need to be explicitly used,
 23 if the figure's location at the end of its motion can be identified via the direction
 24 lexicalized in a motion verb and the physical and functional features of the place
 25 conceptually shifted from the thing.

26 The rest of this paper is organized as follows. In Section 2, I introduce the
 27 morphological differences reflected by the place-thing distinction in Chinese and
 28 the use of localizers as a device for converting a thing into a place. Section 3 re-
 29 views previous studies investigating when a thing noun requires a localizer in
 30 order to be understood as a place, and shows that these studies have not provided
 31 a solution that can explain all possible Chinese motion constructions. In Section
 32 4, a Compatibility Constraint is proposed to show that a description of a motion
 33 event is felicitous only if the physical properties of the ground are compatible
 34 with the lexical meaning of the motion verb, so that the ground can be reached or
 35 moved along in the direction of motion specified by the verb. In Section 5, I pro-
 36 pose the Localizer Condition: the use of a localizer in a ground NP is necessary
 37 only when the information conveyed in the path verb and the ground NP is not
 38 sufficiently specific to identify the figure's location with respect to the ground at
 39 the end of the motion event. In particular, I discuss the specific directions lexical-
 40 ized in path verbs and the functional features of the grounds that are encom-

passed in this condition. Section 6 discusses counterexamples to the Localizer Condition. It argues that these counterexamples arise from the number of syllables in the ground NP or may have pragmatic motivations such as emphasis, contrast and listing. These counterexamples, thus, do not really challenge the general influence of the condition. In Section 7, by taking a crosslinguistic perspective, I show that this constraint and/or condition are relevant in other languages, such as Korean, Likpe, Japanese, and French, which thus like Chinese, belong to a third type of language with respect to the place-thing distinction. Conclusions are drawn in Section 8.

2 Places, things, and localizers converting things to places in Chinese

This section first introduces the nouns denoting things and places, as well as localizers that convert the thing nouns into place nouns in Chinese. Then, it provides examples showing that localizers are not required in every case for a thing to be understood as a place.

2.1 Nouns denoting places and things

In Chinese, the NPs that encode places are referred to as “place words” (Chao 1968; Peyraube 2003; also called “spatial nominals” by Sun (2006)). There are two types of nouns that can directly express the notion of places.

- (5) a. toponyms or place names, e.g., *Niuyue* ‘New York City’, *Zhongguo* ‘China’
 b. places with specialized functions (cf. Sun 2008, 2011; Chappell and Peyraube 2008), e.g., *youju* ‘post office’, *xuexiao* ‘school’, *fanguan* ‘restaurant’, *tushuguan* ‘library’

The first type, toponyms, is self-explanatory in that nouns of this type denote geographical locations. The second type is defined as “nouns for places used as place names” by Chappell and Peyraube (2008: 16). These nouns are usually understood as places because people located at these places carry out activities typically associated with these places (cf. Ameka 1995). For instance, *fanguan* ‘restaurant’ is typically associated with the human activity of dining, and *xuexiao* ‘school’ is typically associated with studying. In addition, the locations of the places are often easily identifiable to speakers/hearers (Sun 2011). For example, if

1 a child says to his mother *I am going to school*, it is clear to the mother which
2 school the child is going to.

3 In contrast, common nouns in Chinese include *fangjian* ‘room’, *zhuozi* ‘table’,
4 *fangzi* ‘house’, *hezi* ‘box’, and so on. In this paper, the nouns denoting these
5 things are called “common nouns”, to distinguish them from place words.

6 Place words and common nouns in Chinese can be distinguished from each
7 other by whether they can directly function as the complement to the generic
8 locative preposition *zai* ‘at’ (cf. Sun 2006, 2008, 2011). As illustrated in (6), place
9 words can directly be taken as a complement by *zai*.

10

11 (6) a. *Wuyi zai niuyue fabiao yanjiang*

12 Wuyi at New.York present speech

13 ‘Wu Yi delivered a speech in New York.’

14 (PKU Corpus)²

15 b. *zai youju ji baoguo*

16 at post.office send parcel

17 ‘send a parcel in the post office’

18 (PKU Corpus)

19

20 In contrast, common nouns cannot directly be taken as a complement by *zai*,
21 even when the things they denote can locate other entities and thus be conceptu-
22 alized as places, as shown in (7).

23

24 (7) a. **Xiaohai zai fangzi wanr*

25 child at house play

26 #‘The child is playing in the house.’ (intended meaning)

27 b. **Xiaomao zai zhuozi shuijiao*

28 kitty at table sleep

29 #‘The kitty is sleeping on the table.’ (intended meaning)

30

31 Following Stosic (2007: 74), I identify four major types of common nouns which
32 denote entities that can be conceptualized as places in Chinese. One is nouns
33 encoding physical object-like entities with no fixed location, e.g., tables (*zhuozi*),
34 boxes (*hezi*), bowls (*wan*), cars (*qiche*) and airplanes (*feiji*) (cf. “object” in Stosic

35

36

37

38 ² All Chinese data in this paper are from three sources: the PKU Corpus (the corpus of Modern
39 Chinese at the Center for Chinese Linguistics Beijing University, 307,317,060 characters, available
40 at <http://ccl.pku.edu.cn/>), the Internet, and the author and the consultants as native speakers of
Mandarin Chinese.

(2007:74) and Choi-Jonin and Sarda (2007:134)). These entities usually are more often viewed as physical objects rather than locations. However, they can serve to locate other entities in space. For instance, a table can support entities on its surface and a car can hold entities in its interior. The second type includes buildings (*dalou*), rooms (*fangjian*), windows (*chuanghu*), and other stationary entities that can be viewed as locations (cf. “mixed entities” in Stosic (2007: 74)). The third type includes entities consisting of “homogeneous and uncountable” (Stosic 2007: *ibid.*) mass materials, e.g., water (*shui*), crowd (*renqun*), and foliage (*shuye*) (cf. “substances” in Stosic (2007: 74)). The fourth type includes nouns encoding generic geographical features, including a river (*he*) or mountain (*shan*), or rivers (*he*) or mountains (*shan*) as geographical features. Unlike proper names that name locations or objects occupying particular geographical locations, these nouns do not refer to specific locations or objects (cf. Stosic 2007; Cablitz 2008).

2.2 Localizer: a device for converting a thing concept into a place concept

Common nouns such as *fangzi* ‘house’ and *zhuozi* ‘table’ can function as places if an extra morpheme is added. As illustrated in (8), when *fangzi* co-occurs with the morpheme *-li* ‘inside’ and *zhuozi* co-occurs with the morpheme *-shang* ‘on top of’, the two nouns can be taken as complements to *zai*, cf. (7a)–(7b).

- (8) a. *Xiaohai zai fangzi-li wanr*
 child at house-inside play
 ‘The child is playing in the house.’
 b. *Xiaomao zai zhuozi-shang shuijiao*
 kitty at table-on.top.of sleep
 ‘The kitty is sleeping on the table.’

In this paper, morphemes such as *-li* ‘inside’ and *-shang* ‘on top of’ that convert a common noun to a place word are called “localizers”.³

³ Chinese localizers are grammaticalized from nouns (Sun 2008; Chappell and Peyraube 2008; Huang et al. 2009; among others). However, previous studies have not yet reached a consensus as to whether these morphemes belong to a lexical category other than noun or are instead a subclass of noun (see Li 2009; Huang et al. 2009; Chu 2006; Lu 2004; Yuan 2000; Zhu 1982). Therefore, these forms are referred to in different terms, e.g., as “NP enclitics” by Sun (2006: 85), “locative particles” by Li and Thompson (1981: 391), “postpositions” by Liu (2008: 39). This paper uses the term “localizer” to stay neutral as to the lexical category these forms belong to.

1 Besides this conversion function, another important function of localizers in
 2 Chinese is to specify the “search domain”, the “space anchored to the ground”
 3 where a physical object is located (Ameka 1999: 9, cf. Nikitina 2008; Levinson
 4 1996). In other words, a search domain specifies where with respect to the ground,
 5 e.g., on top of, above, inside, outside, under, or on bottom of, the object can be
 6 found. For instance, the search domain in (8a) is the inside of the house where
 7 the child is located, and the search domain in (8b) is the top of the table where the
 8 cat is found. In this paper, I show how this function of the localizers influences
 9 the use of the localizers as a conversion device.

10 Chinese has a relatively comprehensive system of localizers, including local-
 11 izers indicating the spatial position of a figure with respect to the reference object
 12 alone (i.e., “intrinsic frame of reference”, Levinson 2003: 41–43), e.g., at the front/
 13 back of a building; localizers indicating the spatial position of a figure with re-
 14 spect to the reference object from the viewpoint of the observer (i.e., “relative
 15 frame of reference”, Levinson 2003: 43–47), e.g., to the left/right of a building;
 16 localizers indicating the spatial position of a figure with respect to fixed landmark
 17 (i.e., “absolute frame”, Levinson 2003: 47–50), e.g., to the east/west of a building;
 18 and localizers indicating topological information, including both information
 19 based on the reference object, e.g., inside, and information based on topological
 20 and certain frames of reference, e.g., *under the rug* that involves topological, in-
 21 trinsic, and absolute information (Levinson 2003: 71–74). In this paper, I focus on
 22 localizers involving the intrinsic frame of reference and topological notion be-
 23 cause they are the most frequently used in Chinese (Chu and Wang 2008) and
 24 only these localizers are sometimes not allowed to co-occur with common nouns
 25 in motion constructions. Chinese localizers expressing such information are typ-
 26 ically divided into two closed subtypes: monosyllabic and disyllabic localizers
 27 (Peyraube 2003; Zhu 1982; Li and Thompson 1981; Sun 2006, 2008, 2011).

28 The monosyllabic localizers are bound morphemes. They co-occur with
 29 common nouns and convert these nouns into place words. As illustrated in (7)
 30 and (8), only after *fangzi* ‘house’ and *zhuozi* ‘table’ co-occur with the localizers *-li*
 31 ‘inside’ and *-shang* ‘on top of’, can they be the complements of the preposition *zai*
 32 ‘at’.

33 Besides *-li* ‘inside’ and *-shang* ‘on top of’, a full list of monosyllabic localizers
 34 involving the intrinsic frame of reference can be found in (9) (Peyraube 2003:
 35 184).

36
 37 (9) *shang* ‘up’, *xia* ‘down’, *qian* ‘front’, *hou* ‘back’, *li/nei* ‘inside’, *wai* ‘outside’,
 38 *zhong* ‘inside, middle’, *jian* ‘in, middle’, *pang* ‘side’

39
 40

Disyllabic localizers are usually formed via the addition of a suffix such as *bianr* ‘side’, *mianr* ‘face’, or *tour* ‘head’ to a monosyllabic localizer (Peyraube 2003; Li and Thompson 1981). Therefore, all disyllabic localizers have two syllables, e.g., *shangbianr* ‘on top of’ and *litour* ‘inside’. Like the monosyllabic localizers, when a disyllabic localizer co-occurs with a common noun, the combination behaves like a place word, as shown in (10).

- (10) a. **zai fangzi/zhuozi*
 At house/table
 b. *zai fangzi-libianr*
 at house-inside
 ‘in the house’
 c. *zai zhuozi-shangbianr*
 at table-on.top.of
 ‘on the table’

But unlike monosyllabic localizers, disyllabic localizers can function by themselves as place words (Sun 2006; Peyraube 2003; cf. Li 2009). For example, according to Sun (2006), *shangmian* ‘on top of’ in (11) is a place word because it can occur directly after the preposition *zai* ‘at’ as its complement.

- (11) *Zai shangmian kan de yuan*
 at up.face see POT far
 ‘One can see far on the top.’
 (Sun 2006: 84)

2.3 Localizers are not an obligatory device for converting a thing to a place

Section 2.2 shows that a common noun denoting a thing can co-occur with a localizer and thus function as a place word, but sometimes a common noun can be understood as a place without a co-occurring localizer. This section provides examples involving common nouns which are taken as complements by path verbs (Talmy 2000, or “verb of inherently directed motion” in Levin 1993: 263), i.e., motion verbs that lexicalize both motion and direction.

Path verbs that can take ground NPs directly as their complements in Chinese include *jin* ‘enter’, *chu* ‘exit’, *shang* ‘ascend’, *xia* ‘descend’, *hui* ‘return’, *dao* ‘arrive’, and the deictic path verbs *lai* ‘come’ and *qu* ‘go’ (cf. Lamarre 2008; Cai

1 2006; Guo and Chen 2009).⁴ When these path verbs follow another motion verb,
 2 as in (12), they are usually referred to as “directional complements” in studies
 3 such as Liang (2005), Y. Liu (1998), Poteet (1987), and Lamarre (2007), cf. Tai
 4 (2003).

- 5
 6 (12) a. *haizi-men zou-jin Gugong Bowuguan*
 7 child-PL walk-enter Gugong museum
 8 ‘The children went into the Museum of the Imperial Palace’
 9 (http://teach.scol.com.cn/html/2008/07/010002006_653402.shtml)
 10 [accessed 9/15/2011])
 11 b. *wo zixin wo yiding hui pa-shang Taishan*
 12 I confident I must can climb-ascend Tai.mountain
 13 ‘I am confident that I can climb (up) Mount Tai.’
 14 (<http://bbs1.people.com.cn/postDetail.do?id=2416856>)
 15 [accessed 9/15/2011])
 16

17 However, these directional complements express the same direction and take the
 18 same ground NPs as the corresponding path verbs; thus, for convenience, I use
 19 the term “path verbs” in this paper regardless of whether they are path verbs or
 20 directional complements.

21 As shown in (13), when the path verbs *jin* ‘enter’ and *shang* ‘ascend’ takes the
 22 common nouns *fangzi* ‘house’ and *zhuozi* ‘table’ as their complement respec-
 23 tively, no localizer is necessary.

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28 ⁴ *Dao* ‘arrive’ is treated as a preposition marking goal by some studies (Lamarre 2007; Cai 2006;
 29 Poteet 1987), and is thus equated with the English *to*. However, this paper treats it as a path verb
 30 because unlike the typical prepositions *cong* ‘from’, *dao* by itself can function as a verb, as in (i).

- 31 (i) *women zhongyu dao/*cong xuexiao le*
 32 We finally arrive/from school ASP
 33 ‘We finally arrived at the school.’

34 Although previous studies (e.g., F. Liu 1998; Liang 2005; Lamarre 2007, 2008) treat *guo* ‘cross’ as
 35 a path verb, this paper does not include *guo* in the list of directed path verbs. The reason is that
 36 although *guo* lexicalizes a path, it does not specify the direction of motion (cf. English cross and
 37 traverse in Rappaport Hovav and Levin 2010). For example, it is unknown in (ii) which side of the
 38 street John started crossing from.

- 38 (ii) *John guo-le natiao jie*
 39 John cross-ASP that.CLF street
 40 ‘John crossed that street.’

- (13) a. *Xiaohai jin-le fangzi* 1
 child enter-ASP house 2
 ‘The child entered the house.’ 3
 b. *Xiaomao shang-le zhuozi* 4
 kitty ascend-ASP table 5
 ‘The kitty went onto the table.’ 6
 7

However, not just every path verb can take a common noun without the 8
 co-occurrence of a localizer. For instance, the motion verb *dao* ‘arrive’ cannot 9
 directly take *fangzi* ‘house’ or *zhuozi* ‘table’ as its complement, as in (14). 10

- (14) a. *Xiaohai dao-le fangzi-(li)* 12
 child arrive-ASP house-inside 13
 ‘The child went into the house.’ 14
 b. *Xiaomao dao-le zhuozi-(shang)* 15
 kitty arrive-ASP table-on.top.of 16
 ‘The kitty went onto the table.’ 17
 18

Therefore, unlike English which is very insensitive to the distinction between 19
 places and things, or Zulu and Yucateco which are highly sensitive to the place- 20
 thing distinction, Chinese seems to present an inconsistent sensitivity to places 21
 and things. In other words, morphological markers are required by common 22
 nouns in some Chinese motion constructions but not required in others. 23

3 Previous studies on the distribution of 25 localizers 26 27 28

With the exception of Lamarre (2007) and Cai (2006), previous studies have 29
 seldom discussed the environments where a common noun needs to co-occur 30
 with a localizer in order to function as the complement to a path verb in Chinese. 31

According to Lamarre (2007: 2), in many syntactic environments, a common 32
 noun needs to co-occur with a localizer in order to function as a ground NP. For 33
 instance, Lamarre points out that in (15), after a preposition, the common noun 34
qiao ‘bridge’ requires the localizer *shang* ‘up’. 35

- (15) *ni kuai cong qiao-(shang) xia-lai* 37
 You quickly from bridge-on descend-come 38
 ‘Come down immediately from the bridge [toward speaker]’ 39
 (Lamarre 2007: 2) 40

1 However, (15) is not representative of motion constructions in general because the
 2 ground NP *qiao-shang* ‘on the bridge’ is a complement to the preposition *cong*
 3 ‘from’ instead of the path verb compound *xia-lai* descend-come ‘go down to the
 4 speaker’. Even if a common noun functions as a complement to a preposition in a
 5 motion construction, not every common noun has to co-occur with a localizer. As
 6 illustrated in (16), the common noun *zhuozi* ‘table’ can be directly taken by the
 7 preposition *xiang* ‘towards’. Nonetheless, in this paper, I focus on ground NPs
 8 taken by path verbs as complements, whereas the situations where they are taken
 9 by locative prepositions are only referred to when necessary.

10

11 (16) *Nanhai xiang zhuozi pao-qu*

12 boy towards table run-go

13 ‘The boy ran towards the table.’

14 (<http://bbs.eduol.cn/2008-2/25/151413433653.html> [accessed 9/15/2011])

15

16 Lamarre (2007: 5) also claims that the path verbs *hui* ‘return’, *dao* ‘arrive’, *lai*
 17 ‘come’ and *qu* ‘go’ “require a localizer on the locative NP if it is not *per se* a place
 18 word”. She does not provide further evidence for this claim, but counterexamples
 19 can be found, as in (13), where the path verbs *jin* ‘enter’ and *shang* ‘ascend’ take
 20 common nouns directly as their complements.

21 Taking a perspective unlike Lamarre’s (2007), Cai (2006) proposes that a
 22 common noun cannot co-occur with a localizer in the sequence “manner of
 23 motion verb + path verb + ground NP + deictic complement”, as in (17).

24

25 (17) *Ta zou-chu jiaoshi-(*li) qu*

26 he walk-exit classroom-(inside) go

27 ‘He went out of the classroom.’

28 (Cai 2006: 68)

29

30 Cai’s (2006) proposal is also limited in that many counterexamples can be found.
 31 For instance, (18) shows a motion construction with the same sequence as that in
 32 (17), but a localizer is required for the ground NP *zhuozi* ‘table’.

33

34 (18) *Mayi pa-dao zhuozi-(xia) qu*

35 ant crawl-arrive table-(under) go

36 ‘The ant crawled under the table.’

37

38 Therefore, neither Lamarre’s nor Cai’s study fully takes into account other syntac-
 39 tic environments. (16) and (18) suggest that the co-occurrence of localizers with
 40 common nouns functioning as ground NPs is not determined by prepositions nor

the word order of motion constructions; rather, the situation is much more complex than is proposed by Lamarre and Cai.

Sun (2006, 2008, 2011) proposes that the locative preposition *zai* is underspecified in expressing spatial relations, so it must take as complement a spatial nominal or NPs with locative value. As (19) illustrates, the common noun *shan* ‘hill’ is indefinite, it has to co-occur with the localizer *shang* ‘on top of’ so as to occur in the *zai* construction.

- (19) a. **Ta zai shan kan richu*
 she at hill see sunrise
 (Sun 2008: 200)
- b. *Ta zai shan-shang kan richu*
 she at hill-on.top.of see sunrise
 ‘She watched the sunrise on the hill.’
 (Sun 2008: 199)

This paper argues that the distribution of localizers in Chinese directed motion constructions is consistent with that in locative constructions, that is, a localizer is required if the information of the figure’s location is not sufficiently specified by the other elements in a construction. In the next two sections, I propose a Compatibility Constraint and Localizer Condition for the distribution of localizers in Chinese directed motion constructions.

4 The Compatibility Constraint on a felicitous motion construction in Chinese

The Compatibility Constraint on felicitous Chinese motion constructions encompasses not only the direction (or “path”) lexicalized in the path verb but also the ground, two components of a motion event according to Talmy (2000). This constraint is stated in (20).

- (20) **Compatibility Constraint:** A description of a motion event is felicitous if the physical properties of the ground are compatible with the lexical meaning of the verb, i.e., the ground can be reached or moved along in the direction of motion specified by the verb.

The physical properties of a ground entity refer to its shape, orientation, dimension, position, size, and its parts and component elements (Chu and Wang 2008, also cf. Pustejovsky’s (1995: 85–100) “formal role” and “constitutive role” in the

1 “qualia structure” of an object). Chu and Wang (2008) have observed that in
 2 Chinese, an entity’s physical properties determine which localizers can be
 3 selected to specify the search domain of an entity, though their study does not
 4 focus on the descriptions of directed motion events. For instance, Chu and Wang
 5 point out that in Chinese, although all three common nouns, *shafa* ‘sofa’, *yizi*
 6 ‘chair’, and *dengzi* ‘stool’, may co-occur with the localizer *-shang* ‘up’ to express
 7 ‘on (the top of) the sofa, chair, and stool’, *shafa* ‘sofa’ and *yizi* ‘chair’ can also
 8 co-occur with the localizer *-li* ‘inside’ while *dengzi* ‘stool’ cannot. They propose
 9 that the difference can be attributed to the different shapes of the three entities. A
 10 sofa and a chair usually have back and arm rests, so besides conceptualized as a
 11 surface, a sofa and a chair may also be viewed as containers; on the contrary, a
 12 stool does not have a back or arm rests, so people can only ‘sit on a stool’ but not
 13 ‘sit in a stool’.

14 I argue that for a directed motion event as well, the physical properties of the
 15 ground determine whether the description of the event is felicitous and which
 16 localizers can be used in the corresponding ground NP. For instance, although
 17 (14) shows that an event of arrival can be ended either inside of a region or on top
 18 of an entity, when the ground is a stool, it is impossible for the figure to arrive at
 19 the inside of the stool because a stool usually cannot be conceptualized as a con-
 20 tainer. In other words, (21) is not acceptable because the physical property of a
 21 stool does not allow the expression *dengzi-li stool-inside*.

22

23 (21) *xiaomao tiao-dao dengzi-shang/*li*
 24 kitty jump-arrive stool-on.top.of/inside
 25 ‘The kitty jumped onto the stool.’

26

27 However, some Chinese motion constructions are still not felicitous even if they
 28 do not violate the Compatibility Constraint. For instance, a house can be concep-
 29 tualized as a container with well-defined boundaries, thus being compatible with
 30 the direction lexicalized in the path verb *dao* ‘arrive’. However, as shown in (14a),
 31 repeated here as (22), *dao* and *fangzi* ‘house’ do not form a felicitous motion
 32 construction.

33

34 (22) **Xiaohai dao-le fangzi*
 35 child arrive-ASP house

36

37 For infelicitous motion constructions like (22), I propose that besides obeying the
 38 Compatibility Constraint, they must obey a Localizer Condition, which deter-
 39 mines when a localizer needs to be used to convert a common noun into a place
 40 word. Next section discusses how this condition operates.

5 The Localizer Condition on the distribution of localizers in common noun ground NPs

Like the Compatibility Constraint, the Localizer Condition also concerns the direction of path verbs and the ground, as in (23).

- (23) **Localizer Condition:** When the Compatibility Constraint is met, a localizer needs to occur and convert the common noun into a place word if the information conveyed in the verb and the physical and functional properties of the ground is not sufficiently specific to identify the figure's location with respect to the ground at the end of the motion event.

Not only does each path verb lexicalize a distinct direction, as noted in Section 4, but path verbs may also differ from each other as to the degree of specification they provide for the direction (Rappaport Hovav and Levin 2010). Furthermore, the more specific the direction lexicalized by a path verb is, the more restricted it is in its selection of ground NP complements because it requires its complements to encode a location compatible with this particular direction. For instance, the verb *jin* 'enter' denotes motion with an 'into' direction. That is, a figure moving in this way crosses a boundary and moves into the enclosed region. Thus, the ground complements to this direction must be enclosed regions.

With a path verb that lexicalizes a more specific direction and a ground compatible with the direction of motion, a motion construction contains sufficient information to allow the identification of the figure's final location. Consider *jin* 'enter' once more. By carrying out the motion of entering, the figure must be located inside an enclosed region. According to the Localizer Condition, the ground NP *fangzi* 'house' does not need co-occur with a localizer, which is why (13a) (repeated here as (24)) is felicitous. The use of the localizer *-li* neither violates the Compatibility Constraint nor the Localizer Condition, but as will be discussed in Section 6.2, it is not preferred because of information redundancy and only occurs for pragmatic purposes.

- (24) *Xiaohai jin-le fangzi*
 child enter-ASP house
 'The child entered the house.'

In contrast, a path verb lexicalizing a less specific direction is also less restricted in its selection of ground NPs. For instance, the path verb *dao* 'arrive' is not specific because a figure can arrive at a location from different directions. In particu-

1 lar, depending on the figure's source location, the figure can arrive from a loca-
 2 tion outside, inside, below, or above the location to be arrived at. Therefore, all
 3 the ground NPs taken by path verbs lexicalizing more specific directions, e.g., the
 4 path verbs *jin* 'enter', *chu* 'exit', *shang* 'ascend', and *xia* 'descend', are also avail-
 5 able as complements of *dao* 'arrive'.

6 However, a motion construction with a verb lexicalizing a less specific direc-
 7 tion cannot precisely identify the figure's location with respect to the ground.
 8 Consider the motion event that involves *dao* 'arrive' and *fangzi* 'house'. Since a
 9 house has an interior and exterior, and since a figure can start moving from either
 10 the interior or exterior of the house, *dao fangzi* arrive house fails to identify
 11 whether the figure arrives inside or outside of the house. Therefore, (14a), re-
 12 peated here in (25), is not acceptable.

13

14 (25) **Xiaohai dao-le fangzi*
 15 child arrive-ASP house

16

17 When a localizer occurs and specifies in which spatial domain of the ground the
 18 figure can be found, (25) becomes felicitous. As illustrated in (26), the localizer *-li*
 19 can be used if the figure arrives at the interior of the house from the exterior and
 20 *-wai* 'outside' is used if the figure moves in a reverse direction.

21

22 (26) *Xiaohai dao-le fangzi-li/wai*
 23 child arrive-ASP house-inside/outside
 24 'The child went into/out of the house.'

25

26

27 5.1 The specification of path in path verbs

28

29 In this subsection, I focus on the specification of direction lexicalized in each path
 30 verb. A path verb lexicalizing a highly specific direction may take a compatible
 31 common noun ground NP directly as its complement, whereas a path verb lexi-
 32 calizing a less specific direction has to take a common noun with a co-occurring
 33 localizer.

34 As shown in previous sections, *jin* 'enter' and *chu* 'exit' specify paths into or
 35 out of an enclosed region. Entities with boundaries that can distinguish their in-
 36 terior space from exterior space usually can be treated as regions, including both
 37 three-dimensional entities (e.g., containers, rooms, boxes) and two-dimensional
 38 entities (e.g., countries, yards) (cf. Svorou 1994:15). The direction of motion lexi-
 39 calized in *jin* and *chu* presuppose a bounded region to be the goal and source of
 40 their motion, respectively. If a ground NP denoting such a region functions as a

complement to *jin* and *chu*, no localizer (usually *-li* ‘inside’) is necessary, since the figure’s location after motion can be inferred. That is, after an event of entering or exiting, the figure can only be located inside or outside of the bounded region. For instance, *fangjian* ‘room’ is a region-like entity. When *jin* takes *fangjian* as its complement, it is understood that the motion is into the room, despite no localizer being present, as in (27a). On the other hand, *jin* cannot be used to describe motion out of a region, or any other directions such as onto a region, as in (27b).

- (27) a. *jin* ***fangjian***
 enter room
 ‘enter the room’
 b. **jin* ***fangjian-wai/shang***
 enter room-outside/on.top.of
 #‘enter the outside of/onto the room’ (intended meaning)

While *jin* and *chu* typically describe motion along a horizontal axis (referred to as “frontal orientation” by Choi-Jonin and Sarda 2007: 128), the path verbs *shang* ‘ascend’ and *xia* ‘descend’ typically describe motion along the vertical axis (referred to as “vertical orientation” by Choi-Jonin and Sarda 2007), including moving up to and down from a location. The specific directions of motion described by these two verbs presuppose a vertically-oriented reference entity (e.g., electric pole, mountain) or a location which is either physically lower or higher than the figure’s source location. If a ground NP denotes such an entity or location, the figure’s location after motion can be easily inferred. In particular, via the motion denoted by *shang* ‘ascend’, the figure moves onto a position which is on top of or above the ground from its lower source position, and via the motion denoted by *xia* ‘descend’, the figure moves from its higher source position down to a position which is at the bottom of or below the ground. In these situations, localizers (usually *shang* ‘up, on top of’) are usually unnecessary, as in (28).

- (28) a. *pa-shang* ***dianxiangan***
 climb-ascend electric.pole
 ‘climb up to the electric pole’
 b. *pao-xia* ***erlou***
 run-descend second.floor
 ‘run down from the second floor’

In addition, like *jin* ‘enter’ and *chu* ‘exit’, the directions lexicalized in *shang* and *xia* are so specific that a figure cannot move in any other direction. For instance, *shang* ‘ascend’ is unable to describe motion going down from a location or into a

1 region, although the location or region may have accessible space for going down
2 or going into, as in (29b).

3

4 (29) a. *shang* ***zhuozi***

5 ascend table

6 'go up to the table'

7 b. **shang* ***zhuozi-xia/li***

8 ascend table-under/inside

9 #'go up under/into [a drawer or a crack of] the table' (intended meaning)

10

11 In contrast, as pointed out above, *dao* 'arrive' is much less specific about its path.
12 When *dao* takes a common noun, e.g., *zhuozi* 'table', as in (30a), the construction
13 is not explicit about the figure's location with respect to the table because the
14 figure could arrive at either the top of, on the bottom of or any other spatial do-
15 mains of a table. Therefore, a localizer is necessary to further specify the destina-
16 tion of the motion, as in (30b).

17

18 (30) a. **dao* ***zhuozi***

19 arrive table

20 b. *dao* ***zhuozi-shang/xia***

21 arrive table-on.top.of/under

22 'go onto/under the table'

23

24 In addition, because *dao* is not specific as to the direction of motion, a figure
25 carrying out an arriving event can potentially reach any accessible location from
26 any direction. Consider the common noun *qiche* 'car' as another example. *Qiche*
27 cannot be directly taken as a complement by *dao* 'arrive' according to the Local-
28 izer Condition. The PKU Corpus shows that among all 45 instances of *dao qiche*
29 arrive car, 43 (96%) of them have a localizer, as in Figure 1.⁵

30 Unlike entities such as *qiche* 'car' with multiple accessible spatial domains, a
31 point-like location (e.g., *qidian* 'starting point' and *zuigaodian* 'highest point')
32 can be conceptualized as an infinitely small space. In other words, such a loca-
33 tion has no inside or outside, top or bottom, or front or rear that is accessible to a
34 figure. Therefore, when such a location is the ground of an event of arrival, the

35

36

37 ⁵ For convenience, this paper uses one monosyllabic localizer to represent all the different forms
38 of localizers expressing the same search domain found in the corpus, e.g., *-shang* 'on' covers
39 *-shang* 'on, up', *-shangmianr* (lit. 'on-face'), *-shangtour* (lit. 'on-head') and *-shangbianr* (lit.
40 'on-side') and *-li* 'inside' covers *-li* 'inside', *-li-mian* (lit. 'in-face'), *-litou* (lit. 'in-head'), *-libian* (lit.
'in-side'), *-zhong* 'inside', and *-nei* 'inside'.

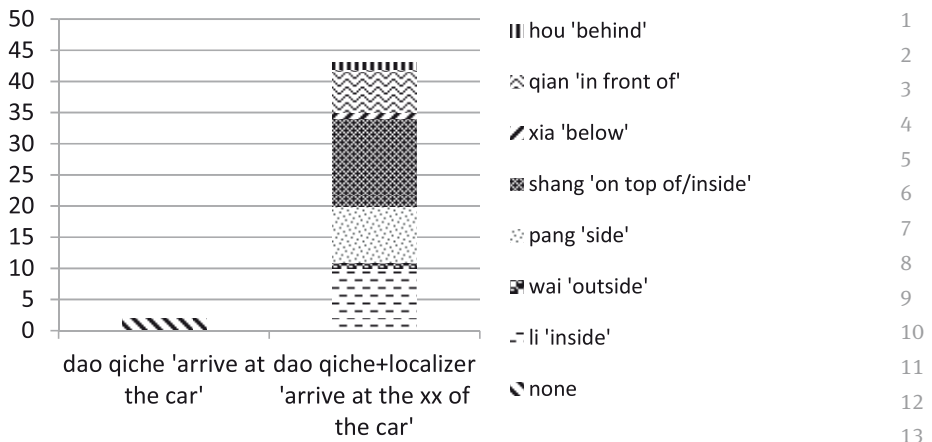


Fig. 1: The distribution of localizers in *dao qiche* construction (PKU Corpus)

only location that a figure can arrive at is the point itself, and thus no localizer is necessary, as in (31).

- (31) a. **jin/*chu/*shang/*xia* *qidian*
 enter/exit/ascend/descend starting.point
 b. *dao* *qidian*
 arrive starting.point
 ‘arrive at the starting point’

This fact once more shows that the use of localizer is unnecessary when the figure’s final location with respect to the ground is identifiable, which again supports the operation of the Localizer Condition.

Unlike *jin* ‘enter’, *chu* ‘exit’, *shang* ‘ascend’, and *xia* ‘descend’, the directions of motion lexicalized in the deictic path verbs *lai* ‘come’ and *qu* ‘go’ vary with respect to the deictic center (usually the speaker). When the speaker’s location with respect to the ground is not inferable, a localizer is required. As illustrated in (32), if the motion construction does not indicate whether the speaker is inside or outside the room, the localizers *-li* ‘inside’ and *-wai* ‘outside’ are necessary to express motion into or out of the room, respectively.

- (32) *lai/qu* *fangjian-li/wai*
 come/go room-inside/outside
 ‘come/go into/out of the room’

1 In contrast, when the deictic center's location is known, a localizer is optional.
 2 For instance, as shown in (33), the figure (and the speaker) was originally located
 3 outside of Pantani's room; and she assumed Pantani to be in the room and then
 4 went inside the room. In this sentence, the spatial relationships among the figure,
 5 Pantani, and the room are explicit, thus making *-li* 'inside' unnecessary.

6
 7 (33) *youyu dangtian henchang shijian meiyou kan-dao Pantani,*
 8 because that.day very.long time NEG see-arrive Pantani
 9 *suoyi qu ta fangjian chakan*
 10 so go his room check
 11 '[I] went to his room for a check because [I] had not seen Pantani for a very
 12 long time on that day.'
 13 (PKU Corpus)

14
 15 The path verb *hui* 'return' seems to lexicalize a direction more specifically than do
 16 *dao* 'arrive', *lai* 'come' and *qu* 'go', but less so than *jin* 'enter', *chu* 'exit', *shang*
 17 'ascend', and *xia* 'descend'. For instance, like *jin* and *chu*, *hui* is able to directly
 18 take a ground NP denoting a region-like entity, e.g., *fangjian* 'room', from which
 19 the figure's location is understood to be inside of the region. However, unlike *jin*,
 20 *chu*, *shang*, and *xia*, which only describe motion with a fixed direction, *hui* may
 21 refer to motion in any possible direction, just like *dao* 'arrive'. For instance, *jin*
 22 'enter' in (34a) cannot express motion onto a surface of an entity and *shang*
 23 'ascend' in (35a) cannot express motion into a region but *hui* is able to express
 24 both the onto and into directions when the NPs co-occur with appropriate local-
 25 izers, as (34b) and (35b) illustrate.

26
 27 (34) a. **jin zhuozi-shang*
 28 enter table-up
 29 b. *hui zhuozi-*(shang)*
 30 return table-up
 31 'return to the top of the table'

32
 33 (35) a. **shang zhuozi-li*
 34 Ascend table-inside
 35 b. *hui zhuozi-*(li)*
 36 return table-inside
 37 'return to the inside (e.g., a drawer) of the table'

38
 39 As shown above, although all path verbs lexicalize certain paths, they differ from
 40 each other in the specification of the paths, which in turn determines whether

their common noun ground NPs need to be converted into place words by localizers. As indicated in the Localizer Condition, a path verb lexicalizing a more specific direction tends to take a compatible common noun directly as its ground NP. In contrast, a path verb lexicalizing a less specific direction requires its ground NP to co-occur with a localizer so as to help identify the figure's location with respect to the ground.

5.2 The functional properties of entities denoted by common noun ground NPs

Most of the grounds discussed so far are typically accessed from directions along one axis, e.g., a figure moves into or out of a room along the horizontal axis, or it moves up and down from a second floor along the vertical axis. However, there are many spatial entities that possess more than one spatial domain, and these spatial domains may be accessed by a figure along different axes. For instance, a figure can move along the horizontal axis into a box or along the vertical axis onto the top of the box. Thus, a box can potentially co-occur with the localizers *-li* 'inside' and *-shang* 'on top of'. Nonetheless, I propose that a ground is more often accessed from a salient accessible axis, that is, the axis corresponding to the direction of motion in which a figure can reach the ground's "use space" (Svorou 1994: 15) and take advantage of its canonical function there. The use space of the ground refers to the spatial domain with that ground's most salient functional property, i.e., the use and purpose of the ground (Svorou 1994; Tai 1993; Chu and Wang 2008; or Pustejovsky's (1995) "telic role"). If the figure moves in the direction of that use space, the localizer specifying the corresponding spatial domain is unnecessary because it is understood that after the motion, the figure will be located in that use space of the ground.

Before looking at the effects of functional properties on directed motion constructions with common noun ground NPs, first consider those effects on non-directed motion constructions and directed motion constructions with non-common noun ground NPs.

In the non-directed motion constructions in Chinese, Chu and Wang (2008) observe that while an entity's physical properties determine what localizers can be selected for the noun denoting the entity, it is the functional properties of the entity that determine which localizer is most frequently used. For instance, they point out that although a table has at least five accessible spatial domains, on, in, under, in front of, and behind the table, the most salient function of a table is to support entities and provide a plane for human activities (e.g., writing, eating, working). Therefore, it is not surprising to find that among the localizers that can

1 co-occur with the noun denoting a table, *shang* ‘on top of’ appears most frequently in a corpus investigation.

3 In directed motion constructions with nouns that denote places, consider the place words which are associated with regular activities, e.g., *youju* ‘post office’, *jiaotang* ‘church’, *jiaoshi* ‘classroom’, and *tushuguan* ‘library’. The grounds denoted by these nouns have accessible interior and exterior spaces. However, the functional property of these grounds is so salient that normally only their interior space is considered to be the use space. In other words, when a figure, mainly a human being, interacts with these grounds, it is commonly understood that the figure goes inside these grounds and carries out activities typically associated with these grounds. Therefore, as illustrated in (36), path verbs lexicalizing horizontal directions are able to directly take these nouns without a localizer, including *dao*, which is the least specified as to direction.

14
15 (36) *jin/lai/dao youju*
16 enter/come/arrive post.office
17 ‘enter/come to/arrive at the post office’
18

19 Only if a figure conducts activities that are not typically associated with these grounds is a localizer required. As illustrated in (37a), a child usually goes inside a school and studies there; thus, the NP *xuexiao* ‘school’ does not need a localizer with the path verb *qu* ‘go’. In contrast, the interior of a school is not necessarily the use space for a person who does not go to school to study (e.g., the child’s father); when such a person goes to a school, a localizer is usually required, as in (37b), because the person does not have a default preference for his/her destination, i.e., the interior or exterior of the school. For instance, a child’s father may go inside and talk with the teachers about his child, or he may just appear outside of the school to pick up his child.

29
30 (37) a. *Xiaohai qu xuexiao le*
31 child go school ASP
32 ‘The child went to the school [to study].’
33 b. *Xiaohai baba qu xuexiao-li le*
34 child dad go school-inside ASP
35 ‘The child’s dad went to the school.’
36

37 The effects of functional properties of entities can also be found in directed motion constructions with common noun ground NPs. A localizer is unnecessary when a figure’s location can be easily identified via the ground’s salient functional properties. For instance, the most salient function of *maopajia* ‘(lit.) cat

climb shelf', a tree-like entity with ledges that a cat can jump onto and rest, is to support cats rather than contain them, even though a *maopajia* may also have a cubby hole that the cat can enter and stay in. Thus, the path verbs *shang* 'ascend' and *xia* 'descend', but not *jin* 'enter' and *chu* 'exit', can take *maopajia* directly as their complement, as in (38a). On the contrary, the most salient function of *maolong* 'lit.) cat cage', a house-like container for a cat to rest in, is to provide an enclosed area for a cat, though it may include interior ledges. Thus, *maolong* can co-occur with the path verbs *jin* 'enter' and *chu* 'exit', but not with *shang* 'ascend' and *xia* 'descend', as in (38b).

- (38) a. *Xiaomao tiao-shang/xia/*jin/*exit-le maopajia*
 kitty jump-ascend/descend/enter/exit-ASP cat.climbing.shelf
 'The kitty jumped up to/down from the cat tree.'
- b. *Xiaomao tiao-*shang/*xia/jin/chu-le maolong*
 kitty jump-ascend/descend/enter/exit-ASP cat.cage
 'The kitty jumped into/out of the cat cage.'

The most salient spatial domains found in Chinese are 'inside' and 'on top of/above'. Regions, especially three-dimensional regions such as containers, usually have interiors that are much more salient than their exteriors in terms of function. Therefore, when a directed motion event involves motion into or out of these regions, it is often understood that the motion is to the interior of the region, so a localizer expressing 'inside' is not necessarily required. Table 1 lists the frequency counts of the localizer *-li* 'inside' co-occurring with *fangjian* 'room', *yuanzi* 'yard', *dalou* 'building', *dianti* 'elevator', and *qiche* 'car' found in the PKU Corpus. The entities denoted by these five common nouns have clear-cut boundaries that

Table 1: Localizers co-occurring with NPs denoting grounds with salient interiors (PKU Corpus)

Common NPs	<i>jin</i> 'enter'		<i>chu</i> 'exit'	
	NP with no localizer	NP with a localizer <i>-li</i> 'inside'	NP with no localizer	NP with a localizer <i>-li</i> 'inside'
<i>fangjian</i> 'room'	237 (88.8%)	30 (11.2%)	18 (100%)	0 (0%)
<i>yuanzi</i> 'yard'	94 (81%)	22 (19%)	51 (94.4%)	3 (5.6%)
<i>dalou</i> 'building'	26 (100%)	0 (0%)	22 (100%)	0 (0%)
<i>dianti</i> 'elevator'	34 (97.1%)	1 (2.9%)	37 (100%)	0 (0%)
<i>qiche</i> 'car'	39 (95.1%)	2 (4.9%)	19 (100%)	0 (0%)
Total	430 (88.7%)	55 (11.3%)	147 (98%)	3 (3%)

1 separate their interior and exterior spaces; in fact, their interior spaces are more
 2 salient because humans usually carry out activities in these spaces. As shown in
 3 Table 1, these nouns more often do not co-occur with localizers when they are
 4 taken as complements by the path verbs *jin* ‘enter’ and *chu* ‘exit’.

5 The other salient functional space is ‘on top of’, which is usually expressed
 6 by the localizer *shang*. For example, all the entities denoted by the common
 7 nouns in Table 2 have their supporting surfaces or rungs as their most salient
 8 spatial domains because these entities are most often used to support other enti-
 9 ties. Therefore, when they are taken by *shang* ‘ascend’ and *xia* ‘descend’, a local-
 10 izer is generally unnecessary.

11 Although a ground usually has only one spatial domain carrying the most
 12 salient function of this ground, this domain may be conceptualized in different
 13 ways, hence accessible from different directions. For instance, entities such as
 14 *feiji* ‘airplane’, *huozhe* ‘train’, and *qiche* ‘car’ can be treated both as bounded re-
 15 gions and supporting surfaces at the same time: on the one hand, these entities
 16 can hold human beings in their interior regions; on the other hand, their floors
 17 are their most salient spatial domains because the floors are the only domains
 18 that humans can stay on. Therefore, the common nouns encoding these entities
 19 may co-occur with both *jin* ‘enter’ and *shang* ‘ascend’. In addition, no matter
 20 whether these entities co-occur with *jin* or *shang*, the humans’ location is always
 21 inside and on the surface floor of these entities. Thus, localizers such as *-li* ‘inside’
 22 and *-shang* ‘up, on top of’ are unnecessary, as shown in (39). This omission of
 23 localizers further supports the Localizer Condition: a localizer is not used if the
 24 figure’s final location can be identified with respect to the ground.

25
 26
 27

28 **Table 2:** Localizers co-occurring with NPs denoting grounds with a salient supporting surface
 29 (PKU Corpus)

Common NPs	<i>shang</i> ‘ascend’		<i>xia</i> ‘descend’	
	NP with no localizer	NP with a localizer <i>-shang</i> ‘on top of’	NP with no localizer	NP with a localizer <i>-shang</i> ‘on top of’
<i>dengzi</i> ‘stool’	14 (100%)	0 (0%)	10 (100%)	0 (0%)
<i>zhuozi</i> ‘table’	13 (100%)	0 (0%)	2 (100%)	0 (0%)
<i>erlou</i> ‘2nd floor’	58 (100%)	0 (0%)	2 (100%)	0 (0%)
<i>tizi</i> ‘ladder’	38 (100%)	0 (0%)	19 (100%)	0 (0%)
<i>guitai</i> ‘counter’	65 (98.5%)	1 (1.5%)	5 (100%)	0 (0%)
Total	188 (99.5%)	1 (0.5%)	38 (100%)	0 (0%)

40

- (39) a. *jin feiji* 1
 enter plane 2
 ‘board the plane’ 3
 b. *shang feiji* 4
 ascend plane 5
 ‘board the plane’ 6

6 “Counterexamples” to the Localizer Condition 9

Section 5 has shown that the use of localizers with common noun ground NPs obeys the Localizer Condition. However, in Chinese, there are some motion constructions where a common noun ground NP co-occurs with a localizer which is unnecessary according to the Localizer Condition. As a container, the most salient property of a bowl is its interior space; however, as (40) illustrates, when the path verb *jin* ‘enter’ takes *wan* ‘bowl’ as its complement, a localizer *li* ‘inside’ is required. 11

- (40) a. *Ruguo ni shi mayi [...] ni pa-shang zhuozi,* 19
 if you are ant you climb-ascend table 20
pa-jin wan-li 21
 climb-enter bowl-inside 22
 ‘If you are an ant, . . . You climb up to the table and climb into the 23
 bowl.’ 24
 (<http://s.dianping.com/topic/2551689> [accessed 9/15/2011]) 25
 b. **pa-jin wan* 26
 climb-enter bowl 27

In contrast, there are also motion constructions where a common noun ground NP does not co-occur with a localizer even though it is expected by the Localizer Condition. For instance, the path verb *dao* ‘arrive’ is not specific as to directions, thus requiring its common noun complement to co-occur with a localizer. However, as shown in (41), the common nouns *dajie* ‘big street’ and *xiaoxiang* ‘small alley’ do not co-occur with any localizer. 28

- (41) *Ta dai-zhe wo zhankai yichang fengkuang de zhuizhu,* 35
 It lead-DUR me start one.CLF crazy MOD chase 36
Cong dajie dao xiaogang you dao dajie, 37
 From big.street arrive small.alley again arrive big.street 38
chuanguo Kuisite gongyuan, yilu lai-dao Malina Gang 39
 cross Crest Park all.the.way come-arrive Marina port 40

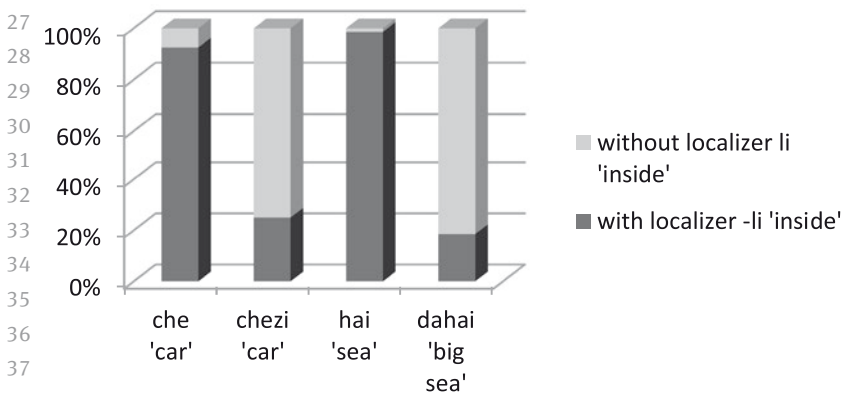
1 'It took me to start a crazy chase, from the big street to the small alley, and
 2 then to the big street, passed the Crest Park, and came all the way to the
 3 Marina Port.'
 4 (<http://www.my285.com/wgwx/zpj/jing/eyzz/006.htm>)

5 This section explains why motion constructions such as (40) and (41) exist. I pro-
 6 pose that these exceptions do not challenge the Localizer Condition, because
 7 they result from the number of syllables in the common noun, as well as prag-
 8 matic motivations.
 9

10
 11 **6.1 Number of syllables in a common noun ground NP**
 12

13 Sun (2008, 2011) proposes that the locative preposition *zai* 'at' normally does not
 14 take monosyllabic place words as complements. When functioning as comple-
 15 ments to path verbs, monosyllabic ground NPs are also not preferred. Returning
 16 to (40) that contains two motion constructions, *pa-shang zhuozi* climb-ascend
 17 table 'climb up to the table' and *pa-jin wan-li* climb-enter bowl-inside 'climb into
 18 the bowl'. In the first construction, *zhuozi* 'table' is a disyllabic noun and the most
 19 salient functional property of a table is its surface, so the path verb *shang* 'ascend'
 20 can directly take *zhuozi* as its complement. In the second construction, however,
 21 *wan* 'bowl' is monosyllabic, so it requires the localizer *-li* 'inside' even though it is
 22 expected by the Localizer Condition to be taken as complement by the path verb
 23 *jìn* 'enter' directly.

24 Figure 2 shows the corpus data for four common nouns, the monosyllabic
 25 *che* 'car' and *hai* 'sea' and their corresponding disyllabic *chezi* 'car' and *dahai*



39 **Fig. 2:** Corpus data contrasting the frequencies of monosyllabic and disyllabic ground NPs with
 40 and without a localizer

'sea, big sea'. When they function as the complements to the path verb *jìn* 'enter', the monosyllabic *chē* 'car' and *hǎi* 'sea' co-occur with a localizer in almost all instances, whereas the disyllabic *chēzi* 'car' and *dǎhǎi* 'sea' more often do not co-occur with localizers. This figure further shows that localizers tend to occur when the common nouns are monosyllabic.

Note that in Chinese, there are several frequently used constructions consisting of a path verb and a monosyllabic common noun which lack any localizer, e.g., *jìn shuǐ* enter water, *shàng shān* ascend mountain and *xià shuǐ* descend water. Nonetheless, the meanings of these constructions may have lexicalized and thus are not always the same as the corresponding constructions with the monosyllabic nouns with co-occurring localizers. For instance, besides referring to the physical motion of going into water, *xià shuǐ* descend water can also refer to the launching of a newly produced boat or becoming involved in evildoing. However, when the noun *shuǐ* 'water' co-occurs with *lǐ* 'inside', the construction *xià shuǐ-lǐ* 'descend water-inside' only refers to the physical motion of going into water.

In addition, these constructions may have developed into collocations, which thus have a different syntactic structure from their corresponding constructions where a localizer is present. For instance, as illustrated in (42), if a manner of motion verb *tiào* 'jump' occurs before the path verb *jìn* 'enter' in *jìn shuǐ* 'go into the water', then a localizer *lǐ* 'inside' must occur with the monosyllabic noun *shuǐ* 'water'.

- (42) a. *jìn shuǐ*
 enter water
 'go into the water/something is filled with water'
- b. *tiào jìn shuǐ-lǐ*
 jump-enter water-inside
 'jump into the water'

Therefore, with the exception of the constructions that may have developed into collocations, a monosyllabic common noun usually needs to co-occur with a localizer despite the Localizer Condition.

6.2 Pragmatic motivations

Besides the effects of the number of syllables in a ground NP, the localizers which is unexpected by the Localizer Condition may also occur because of pragmatic motivations. As in (43), although the co-occurrence of the localizer *-lǐ* 'inside'

1 with the ground NP *fangjian* ‘room’ does not violate the Compatibility Constraint,
 2 *-li* is usually not used since the path verb *jin* and the ground *fangjian* can clearly
 3 specify the figure’s final location. Therefore, the use of *-li* is semantically redun-
 4 dant (cf. Gricean maxim of quantity [Grice1975]) and often is omitted in Chinese
 5 motion constructions.

6

7 (43) *Xiaohai jin-le fangzi-li*
 8 child enter-ASP house-inside
 9 ‘The child entered the house.’

10

11 Nonetheless, “redundant” use of localizers is found in Chinese. It is occasionally
 12 adopted in order to achieve pragmatic effects such as emphasis and contrast
 13 (similar effects can be found with the *zai* case in Sun (2011)). Table 1 in Section 5.2
 14 shows that although the path verb *jin* ‘enter’ in most cases takes NPs that denote
 15 region-like entities directly, there are some instances where a localizer *-li* ‘inside’
 16 is used. A closer examination of these instances shows that in many of the cases,
 17 *-li* is used for the purpose of emphasis or contrast. (44) provides three examples
 18 with the ground NP *yuanzi* ‘yard’. In (a), the figure is asked by the speaker to move
 19 inside of the yard so as not to be seen by others; in (b), the figure’s (peasants)
 20 moving into the yard is contrasted with their tractors, which were parked outside
 21 the yard, and in (c), the figure’s going into the inside of yard only takes place after
 22 he greeted the other person with respect. All three instances suggest a strong as-
 23 sociation between the use of the localizer *-li* ‘inside’ and the speaker’s intention
 24 to contrast the space inside and outside of the ground.

25

26 (44) a. *Ni-men zou-jin yuanzi-li lai ba, burandehua, hui*
 27 you-PL walk-enter yard-inside come SFP otherwise will
 28 *bei ren wangjian*
 29 PASS people see.see
 30 ‘Please walk into the inside of the yard. Otherwise [you] will be seen by
 31 others.’

32 b. *Cainong-men jiang... Tuolaji Tingfang zai*
 33 vegetable.peasant-PL OBJ.M tractor park.put at
 34 *cunwei dayuan menkou, zou jin*
 35 village.administration big.yard door.mouth walk enter
 36 ***yuanzi-li***
 37 yard-inside
 38 ‘The vegetable peasants parked their tractors at the outside the yard
 39 door of the village administration building, and [they] walked into the
 40 yard.’

- c. *ji gongjing de wen le an, zhe cai jin* 1
 extremely respectful MOD greet PERF health this then enter 2
 yuanzi-li lai 3
 yard-inside come 4
 ‘Only after [he] greeted [Nie Xiaoxuan] with great respect, then did he 5
 went into the yard.’ 6
 (PKU Corpus) 7

In addition to contrast, when more than one common noun functions as the complement of a path verb, these common nouns usually do not need to be converted into place words by localizers, cf. the listing of NPs as the complement of the preposition *zai* ‘at’ in Sun (2008). For instance, the path verb *dao* ‘arrive’ usually requires a common noun ground NP to co-occur with a localizer, but when *dao* takes a list of ground NPs, as *dajie* ‘big street’ and *xiaoxiang* ‘small alley’ in (41), repeated here as (45), the localizer becomes unnecessary.

- (45) *Ta dai-zhe wo zhankai yichang fengkuang de zhuizhu,* 16
 It lead-DUR me start one.CLF crazy MOD chase 17
Cong dajie dao xiaogang you dao dajie, 18
 from big.street arrive small.alley again arrive big.street 19
chuanguo Kuisite gongyuan, yilu lai-dao Malina Gang 20
 cross Crest Park all.the.way come-arrive Marina port 21
 ‘It took me to start a crazy chase, from the big street to the small alley, and 22
 then to the big street, passed the Crest Park, and came all the way to the 23
 Marina Port.’ 24
 (<http://www.my285.com/wgwx/zpj/jing/eyzz/006.htm> [accessed 9/14/2011]) 25

Therefore, for certain pragmatic purposes, a localizer can be added or deleted “against” the Localizer Condition. However, like those counterexamples in Section 6.1 that violate this condition because of the number of syllables in a common noun, these exceptions do not really challenge the general influence of the Localizer Condition over common noun ground NPs.

7 A crosslinguistic perspective on the Compatibility Constraint and the Localizer Condition

Sections 4 and 5 show that Chinese motion constructions obey the constraint that the physical nature of the ground must be compatible with the direction lexical-

1 ized in the path verb. Furthermore, the use of localizers in common noun ground
 2 NPs is regulated by the condition that the information conveyed in the path verb
 3 and the ground NP must be sufficiently specific so as to identify the figure's final
 4 location in relation to the ground. Although this constraint and condition are mo-
 5 tivated with Chinese data, they would be expected to hold in other languages.
 6 Previous studies have paid little attention to the omission of localizers in the
 7 ground NPs of motion constructions, but there are indeed some languages show-
 8 ing this phenomenon and the Compatibility Constraint, and even both the Com-
 9 patibility Constraint and Localizer Condition, appear to be operative in them as
 10 well. Among these languages, some motion verbs in Japanese and French are
 11 found to impose strong restriction on the ground they take, and thus only select
 12 grounds that are compatible with the directions lexicalized in these verbs. In ad-
 13 dition, motion constructions in Likpe and Korean obey both the Compatibility
 14 Constraint and Localizer Condition just like Chinese motion constructions. Fur-
 15 thermore, this constraint and condition are also expected to hold in languages
 16 where the ground is a complement of a lexical category other than verb, e.g.,
 17 prepositions.

18
 19

20 7.1 Languages expressing a spatial relationship in a verb

21

22 Japanese has a type of motion verb called “ground path verb” which is highly
 23 specific with respect to the nature of the ground it selects (Muehleisen and Imai
 24 1997). For instance, *wataru* ‘cross’ denotes motion crossing a flat barrier; thus, it
 25 only selects grounds that can be viewed as flat barriers, (e.g., river, street),
 26 whereas non-barrier grounds (e.g., room) and non-flat barrier grounds (e.g.,
 27 mountain) are not allowed, as shown in (46).

28

- 29 (46) a. *Jun wa kawa/michi o watatta*
 30 Jun TOP river/street O cross-PAST
 31 ‘Jun crossed the river/street.’
 32 b. **Jun wa heya/yama o watatta*
 33 Jun TOP room/mountain O cross-PAST
 34 #‘Jun crossed the room/mountain.’ (intended meaning)
 35 (Muehleisen and Imai 1997: 332)

36

37 In contrast, *koeru* ‘cross’, a verb also denoting crossing a barrier, only selects
 38 grounds that can be viewed as vertical barriers (e.g., mountain, wall, gate), as in
 39 (47).

40

- (47) a. *Ikkou wa hakone no yama o koeta* 1
 group TOP Hakone GEN mountain O go-over-PAST 2
 ‘The group went over the Hakone Mountains.’ 3
- b. ??*Ikkou wa kawa o koeta* 4
 group TOP river O go-over-PAST 5
 ‘The group crossed the river.’ 6
- c. **Ikkou wa torii o koeta* 7
 group TOP shrine-gate O go-over-PAST 8
 #‘The group went through the shrine gate.’ (intended meaning) 9
 (Muehleisen and Imai 1997: 334) 10

Such verbs behave like the Chinese path verbs *jin* ‘enter’, *chu* ‘exit’, *shang* ‘ascend’, 12
 and *xia* ‘descend’ in that they all lexicalize information about the grounds and 13
 only select the grounds that are compatible with their lexical meaning. 14

In French, as well, the path verbs *monter* ‘move up’ and *descendre* ‘move 15
 down’ are highly restricted in their selection of grounds (Choi-Jonin and Sarda 16
 2007). As shown in (48), only vertically oriented entities that can function as a 17
 “pathway” (Choi-Jonin and Sarda 2007: 141) are selected by them. According to 18
 Choi-Jonin and Sarda (2007), grounds with a pathway in French include entities 19
 such as *escalier* ‘stairs’, *pente* ‘slope’, and *côte* ‘hillside’, whereas other entities, 20
 e.g., *montagne* ‘mountain’, *arbre* ‘tree’, or *le poteau électrique* ‘electric pole’ 21
 cannot be conceptualized as having pathways despite being vertically oriented. 22

- (48) a. *Paul monte/descend l’escalier/ la pente/ la côte.* 24
 ‘Paul is moving up/down the stairs/the slope/ the hillside.’ 25
- b. *Paul monte/descend ??la montagne/ ??l’arbre/ ??le poteau électrique.* 26
 #‘Paul is moving up/down the mountain/tree/electric pole.’ (intended 27
 meaning) 28
 (Choi-Jonin and Sarda 2007: 141) 29

Like Japanese and French, Likpe and Korean have motion constructions in which 31
 the ground must be compatible with the direction specified by the verb. Further- 32
 more, like Chinese, the ground NPs in Likpe and Korean must co-occur with local- 33
 izers when the information conveyed in the verb and the ground is not sufficiently 34
 specific to identify the figure’s final location with respect to the ground. 35

Likpe is a Central Togo language mainly spoken in the northern part of the 36
 Volta region of Ghana. According to Ameka (1999), Likpe uses verbs to express 37
 the spatial relationship between the figure and the ground, and postpositions to ex- 38
 press the search domain, as shown in (49). Therefore, postpositions in Likpe 39
 function in the same way as localizers in Chinese. 40

1 (49) *bə-bəə bə-nyǎ bəə be-tidi be-tsywá sí lǎ*
 2 3PL-come 3PL-see that MPL-person CMPL-some sit LOC
 3 ***kə-tíni ká-lǎ***
 4 CM-mountain under
 5 ‘When they came they saw that there were some people living/staying at
 6 the bottom of the mountain.’
 7 (Ameka 1999: 22)

8
 9 Ameka (1999) observes that Likpe postpositions are not used in all spatial con-
 10 structions. He proposes two conditions for their omission. One is that postposi-
 11 tions are unnecessary whenever the verb and the ground can be “interpreted ste-
 12 reotypically” (Ameka 1999: 26). By stereotypical interpretation, Ameka provides
 13 an example showing that when the figure is in a ground with a containing region
 14 (e.g., a building), the postposition expressing ‘inside’ is not expressed because
 15 the figure can be typically understood to be located inside of the ground, as in
 16 (50).

17
 18 (50) *o-kpé dí-yó*
 19 3SG-V CM-building
 20 ‘He is in the building.’
 21 (Ameka 1999: 26)

22
 23 The second condition is relevant to the direction specified as part of a verb’s lexi-
 24 cal meaning. Postpositions are unnecessary if the search domain is indicated by
 25 the lexical meaning of the verb (and context). For instance, Ameka points out that
 26 the verb *táká* ‘make contact with supporting surface’ does not require the ground
 27 to take the postposition *ə-suə* ‘surface’ in order to express an ‘on horizontal sur-
 28 face’ relation because the verb already entails the meaning of surface contact, as
 29 in (51).

30
 31 (51) *ku-kwə ko-má táká li shelf*
 32 CM-book AGR-DET V LOC shelf
 33 ‘The book is on the shelf.’
 34 (Ameka 1999: 26)

35
 36 These two conditions in Likpe are comparable to the condition of using localizers
 37 in Chinese. That is, a postposition or localizer is not needed when the figure’s lo-
 38 cation can be inferred from the verb and the nature of the ground. Ameka further
 39 observes that with these verbs and grounds, a postposition is only used to em-
 40 phasize the exact location of the figure. The same phenomenon is also to be true

of Chinese, where the “unnecessary” localizers are added to achieve pragmatic effects such as emphasis and contrast (as in Section 6.2).

Korean also has a similar constraint and condition. According to Choi-Jonin and Sarda (2007), the path verbs *dilə-ga-da* ‘move in’ and *na-ga-da* ‘move out’ select a ground denoting a three-dimensional object with an interior (e.g., house), as in (52a). If the ground has no interior (e.g., table), a localizer (or “relational noun of localization” in Choi-Jonin and Sarda) must follow the noun denoting the ground, as in (52b).

- (52) a. *Insu cib-e dil-ə-ga-n-da*
 Insoo house-LOC move.in-CS-go-PST-TS
 ‘Insoo is entering the house.’
 b. *Insu-ga cʰegsaŋ-mit-e dil-ə-ga-n-da*
 Insoo-NOM table-underneath-LOC move.in-CS-go-PST-TS
 ‘Insoo is going under the table.’
 (Choi-Jonin and Sarda 2007: 136)

Similarly, the path verbs expressing vertical motion, *ori-da* ‘move up’ and *neri-da* ‘move down’, select vertically-oriented entities (e.g., mountain, hill, tree, electric pole) or entities whose physical locations are higher or lower than the figure’s source position, as in (53). Otherwise, postpositions are required, such as *ʷi* ‘top’ in (54).

- (53) *Insu-ga namu-e oll-a-ga-sʻ-ə*
 Insoo-NOM tree-LOC move.up-CS-go-PAST-TS
 ‘Insoo climbed up the tree.’
 (Choi-Jonin and Sarda 2007: 137)
 (54) a. *Mimi-ga capʰan-ʷi-e oll-a-ga-sʻ-ə*
 Mimi-NOM keyboard-top-LOC move.up-CS-go-PAST-TS
 ‘Mimi climbed on the keyboard.’ (Mimi is a cat)
 b. ??*Mimi-ga capʰan-e oll-a-ga-sʻ-ə*
 Mimi-NOM keyboard-LOC move.up-CS-go-PAST-TS
 (Choi-Jonin and Sarda 2007: 137)

In this sense, both Korean and Likpe operate like Chinese in their optional use of localizers (or relational nouns of localization, postpositions); that is, the use of localizers is determined by whether it is necessary to help identify the figure’s final location. In addition, as in Chinese, the localizers expressing ‘inside’ and ‘on top of/above’ are the ones that are most often omitted in Korean and Likpe.

1 7.2 Languages expressing a spatial relationship in a 2 preposition 3

4 Besides verbs, prepositions are used to denote spatial relationships in a number
5 of languages. In some of these languages, the operation of the Compatibility Con-
6 straint and Localizer Condition can be found with such elements as well.

7 Chinese is a language that can use either path verbs or prepositions to ex-
8 press a figure's location with respect to the ground (cf. Hsiao 2009; Ma 2008). Like
9 path verbs, prepositions also follow the constraint and condition. As proposed by
10 Sun (2006, 2008, 2011, cf. Peyraube 2003; Chappell and Peyraube 2008), the Chi-
11 nese preposition *zai* 'at/in' is underspecified for spatial position; therefore, all
12 indefinite common nouns must co-occur with a localizer before functioning as
13 the complements to *zai*. On the other hand, the preposition *yan* 'along' is more
14 specific about the figure's location in relation to the ground and usually selects
15 grounds that can be conceptualized as a long pathway, e.g., *tielu* 'railroad',
16 *hai'anxian* 'shoreline', *he* 'river'. As shown in (55), no localizer is necessary if *yan*
17 takes such a ground.

18
19 (55) *Keche yan xiaolu jixu xingjin*
20 guest.car along small.road continue advance
21 'The guest car continues travelling forward along the small road.'
22 (PKU Corpus)

23
24 In French, although some path verbs can take ground NPs directly, as shown
25 in (48), the ground NPs most frequently appear as the complements to PPs
26 (Choi-Jonin and Sarda 2007). In addition, these ground NPs also obey the Local-
27 izer Condition in that they must co-occur with localizers when the figure's loca-
28 tion cannot be easily inferred from the preposition and the ground. For instance,
29 according to Choi-Jonin and Sarda, the *de* 'from' PP of the path verb *sortir* 'move
30 out' can only directly select grounds with an interior, as in (56a), whereas a
31 ground without an interior has to take a preposition which is able to define an
32 interior, as in (56b).

33
34 (56) a. *Paul sort de la maison/de la boîte.*
35 'Paul is going out of the house/the night club.'
36 b. *Paul sort de derrière la porte/de dessous la table.*
37 'Paul is coming out from behind the door/from under the table.'
38 (Choi-Jonin and Sarda 2007: 136)

39
40

These prepositions are similar to path verbs in the way that they all express the location of the figure with respect to the ground. In addition, these prepositions take grounds with or without localizers in the same way as the path verbs in Chinese, Korean and Likpe. These similarities suggest that the Compatibility Constraint and Localizer Condition can hold despite the different ways that languages may adopt to encode spatial relationships.

8 Conclusions

This paper showed that although Chinese shows some sensitivity to the thing-place distinction, the localizer as a thing-to-place conversion is not required in all motion constructions. Evidence was provided to show that the use of Chinese localizers must meet a Localizer Condition. Specifically, a localizer does not need to co-occur with a common noun ground NP if the figure's final location can be identified via the information conveyed in the path verb and the ground. Although other factors such as the number of syllables in a ground NP and pragmatics motivations (e.g., emphasis, contrast, and listing) contribute to the distribution of localizers as well, they do not challenge the general influence of the Localizer Condition.

In addition to Chinese, this paper also demonstrated that the Localizer Condition can be found in other languages, including those which use prepositions rather than verbs to encode spatial relationships. And these languages on one hand are unlike English which is very insensitive to the distinction, and on the other hand are unlike Zulu or Yucateco that always require some devices for converting a thing noun into a place noun.

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14 Appendix. List of abbreviations used in the paper

16 A = Cross-reference clitic; AGR = Agreement marker; ASP = Aspectual marker; B =
 17 Cross-reference suffix; CLF = Classifier; CM = Class marker; CS = Conjunctive
 18 suffix; D = Distal-deictic particle; DEF = Definite determiner; DUR = Durative
 19 marker; LOC = Locative/generic preposition; NEG = Negative marker; NOM =
 20 Nominative; NP = Noun phrase; O-o = Accusative case; OBJ.M = Object marker;
 21 PASS = Passive marker; PAST = Past tense; PL = Plural; POSS = Possessive marker;
 22 POT = Potential marker; PP = Prepositional phrase; DET = Determiner; PST =
 23 Present tense; REL = Relational derivation; SFP = Sentence final particle; TH =
 24 Topic (or Theme); TOP = Topic; TS = Terminal suffix

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