Jingxia Lin

Thing-place distinction and localizer
distribution in Chinese directed motion
construction

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

Keywords: thing-place distinction, Chinese localizer, directed motion construc-
tion

Jingxia Lin: School of Humanities and Social Sciences, Division of Chinese, Nanyang
Technological University, Singapore. E-mail: jingxialin@ntu.edu.sg.

1 Introduction

PLACE (or LOCATION in Stosic 2007) and THING (or OBJECT in Stosic 2007) are
recognized as two ontological categories (Jackendoff 1983; Lyons 1977; cf.
Choi-Jonin and Sarda 2007; Stosic 2007). Spatial regions that can locate things are
typically conceptualized as places (e.g., New York, China) (Lyons 1977; Jackendoff
1983). Things are physical objects, e.g., tree, table, that stand or move with re-
spect to one another (Jackendoff 1983, cf. Choi-Jonin and Sarda 2007). However, a
thing concept can be converted into a place concept. For instance, a table by itself
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 dis-
tinction, must use the generic preposition *ti’* to shift a thing noun to a place noun
(Bohnemeyer 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**
    there sit-DIS(B3) A3=dog-REL PREP:A3=back.of.body DET=house=D2
    ‘There the dog is sitting outside the house.’
    (Bohnemeyer 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 func-
tions (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.
However, if the head of a ground phrase is not a noun that denotes a concrete thing, but an abstract noun, e.g., ‘óok’ol ‘top’, the preposition ‘ti’ is not required, as in (4) (Bohnemeyer and Báez 2008).

(4) Le=lùuch=o’ ti’ yàan y=óok’ol le=mesa=o’
DEF=cup=D2 there EXIST(B3SG) A3=top DET=table=D2
‘The cup, it’s there on the table.’
(Bohnemeyer and Báez 2008: 8)

In this paper, I show that a language sensitive to a place-thing distinction may behave inconsistently in their use of thing-to-place conversion devices, by drawing evidence from expressions of directed motion events in Modern Mandarin Chinese (hereafter, Chinese). The term “directed motion event” refers to an event in which a moving object moves spontaneously (without an external cause) in a certain direction with respect to a reference object and ends up in a new location as a consequence of that event. The moving object and the reference object are called “figure” and “ground” (Talmy 2000: 25), respectively. I argue that languages like Chinese show some sensitivity to a place-thing distinction. However, the conversion devices are not required in all cases. Rather, if a figure’s location with respect to the thing is identifiable based on the information of a motion construction, then the thing is understood as a place without a conversion device. In the case of Chinese, a morphological marker does not need to be explicitly used, if the figure’s location at the end of its motion can be identified via the direction lexicalized in a motion verb and the physical and functional features of the place conceptually shifted from the thing.

The rest of this paper is organized as follows. In Section 2, I introduce the morphological differences reflected by the place-thing distinction in Chinese and the use of localizers as a device for converting a thing into a place. Section 3 reviews previous studies investigating when a thing noun requires a localizer in order to be understood as a place, and shows that these studies have not provided a solution that can explain all possible Chinese motion constructions. In Section 4, a Compatibility Constraint is proposed to show that a description of a motion event is felicitous only if the physical properties of the ground are compatible with the lexical meaning of the motion verb, so that the ground can be reached or moved along in the direction of motion specified by the verb. In Section 5, I propose the Localizer Condition: the use of a localizer in a ground NP is necessary only when the information conveyed in the path verb and the ground NP is not sufficiently specific to identify the figure’s location with respect to the ground at the end of the motion event. In particular, I discuss the specific directions lexicalized 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
a child says to his mother *I am going to school*, it is clear to the mother which school the child is going to.

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

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

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

    Wuyi at New.York present speech

    ‘Wu Yi delivered a speech in New York.’

    (PKU Corpus)²

b. *zai youju ji baoguo*

    at post.office send parcel

    ‘send a parcel in the post office’

    (PKU Corpus)

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

(7) a. *Xiaohai zai fangzi wanr*

    child at house play

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

b. *Xiaomao zai zhuozi shuijiao*

    kitty at table sleep

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

Following Stosic (2007: 74), I identify four major types of common nouns which denote entities that can be conceptualized as places in Chinese. One is nouns encoding physical object-like entities with no fixed location, e.g., tables (*zhuozi*), boxes (*hezi*), bowls (*wan*), cars (*qiche*) and airplanes (*feiji*) (cf. “object” in Stosic 2007: 74).
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 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.
Besides this conversion function, another important function of localizers in Chinese is to specify the “search domain”, the “space anchored to the ground” where a physical object is located (Ameka 1999: 9, cf. Nikitina 2008; Levinson 1996). In other words, a search domain specifies where with respect to the ground, e.g., on top of, above, inside, outside, under, or on bottom of, the object can be found. For instance, the search domain in (8a) is the inside of the house where the child is located, and the search domain in (8b) is the top of the table where the cat is found. In this paper, I show how this function of the localizers influences the use of the localizers as a conversion device.

Chinese has a relatively comprehensive system of localizers, including localizers indicating the spatial position of a figure with respect to the reference object alone (i.e., “intrinsic frame of reference”, Levinson 2003: 41–43), e.g., at the front/back of a building; localizers indicating the spatial position of a figure with respect to the reference object from the viewpoint of the observer (i.e., “relative frame of reference”, Levinson 2003: 43–47), e.g., to the left/right of a building; localizers indicating the spatial position of a figure with respect to fixed landmark (i.e., “absolute frame”, Levinson 2003: 47–50), e.g., to the east/west of a building; and localizers indicating topological information, including both information based on the reference object, e.g., inside, and information based on topological and certain frames of reference, e.g., under the rug that involves topological, intrinsic, and absolute information (Levinson 2003: 71–74). In this paper, I focus on localizers involving the intrinsic frame of reference and topological notion because they are the most frequently used in Chinese (Chu and Wang 2008) and only these localizers are sometimes not allowed to co-occur with common nouns in motion constructions. Chinese localizers expressing such information are typically divided into two closed subtypes: monosyllabic and disyllabic localizers (Peyraube 2003; Zhu 1982; Li and Thompson 1981; Sun 2006, 2008, 2011).

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

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

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

(12) a. haizi-men zou-jin Gugong Bowuguan
   child-PL walk-enter Gugong museum
   ‘The children went into the Museum of the Imperial Palace’

b. wo zixin wo yiding hui pa-shang Taishan
   I confident I  must can climb-ascend Tai.mountain
   ‘I am confident that I can climb (up) Mount Tai.’

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

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

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

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

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

(ii) john guo-le natiao jie
    John cross-ASP that.CLF street
    ‘John crossed that street.’
However, not just every path verb can take a common noun without the co-occurrence of a localizer. For instance, the motion verb dao ‘arrive’ cannot directly take fangzi ‘house’ or zhuozi ‘table’ as its complement, as in (14).

(14) a. Xiaohai dao-le fangzi-*(li)  
child arrive-ASP house-inside  
‘The child went into the house.’

b. Xiaomao dao-le zhuozi-*(shang)  
kitty arrive-ASP table-on.top.of  
‘The kitty went onto the table.’

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

3 Previous studies on the distribution of localizers

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

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

(15) ni kuai cong qiao-*(shang) xia-lai  
You quickly from bridge-on descend-come  
‘Come down immediately from the bridge [toward speaker]’  
(Lamarre 2007: 2)
However, (15) is not representative of motion constructions in general because the
ground NP qiao-shang ‘on the bridge’ is a complement to the preposition cong
‘from’ instead of the path verb compound xia-lai descend-come ‘go down to the
speaker’. Even if a common noun functions as a complement to a preposition in a
motion construction, not every common noun has to co-occur with a localizer. As
illustrated in (16), the common noun zhuozi ‘table’ can be directly taken by the
preposition xiang ‘towards’. Nonetheless, in this paper, I focus on ground NPs
taken by path verbs as complements, whereas the situations where they are taken
by locative prepositions are only referred to when necessary.

(16) Nanhai xiang zhuozi pao-qu
boy towards table run-go
‘The boy ran towards the table.’

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

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

(17) Ta zou-chu jiaoshi-(*li) qu
he walk-exit classroom-(inside) go
‘He went out of the classroom.’
(Cai 2006: 68)

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

(18) Mayi pa-dao zhuozi-*xia qu
ant crawl-arrive table-(under) go
‘The ant crawled under the table.’

Therefore, neither Lamarre’s nor Cai’s study fully takes into account other syntac-
tic environments. (16) and (18) suggest that the co-occurrence of localizers with
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 under-specified 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 Talmey (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
“qualia structure” of an object). Chu and Wang (2008) have observed that in
Chinese, an entity’s physical properties determine which localizers can be
selected to specify the search domain of an entity, though their study does not
focus on the descriptions of directed motion events. For instance, Chu and Wang
point out that in Chinese, although all three common nouns, shafa ‘sofa’, yizi
‘chair’, and dengzi ‘stool’, may co-occur with the localizer -shang ‘up’ to express
‘on (the top of) the sofa, chair, and stool’, shafa ‘sofa’ and yizi ‘chair’ can also
co-occur with the localizer -li ‘inside’ while dengzi ‘stool’ cannot. They propose
that the difference can be attributed to the different shapes of the three entities. A
sofa and a chair usually have back and arm rests, so besides conceptualized as a
surface, a sofa and a chair may also be viewed as containers; on the contrary, a
stool does not have a back or arm rests, so people can only ‘sit on a stool’ but not
‘sit in a stool’.

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

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

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

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

For infelicitous motion constructions like (22), I propose that besides obeying the
Compatibility Constraint, they must obey a Localizer Condition, which deter-
mines when a localizer needs to be used to convert a common noun into a place
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-
lar, depending on the figure’s source location, the figure can arrive from a location outside, inside, below, or above the location to be arrived at. Therefore, all the ground NPs taken by path verbs lexicalizing more specific directions, e.g., the path verbs jin ‘enter’, chu ‘exit’, shang ‘ascend’, and xia ‘descend’, are also available as complements of dao ‘arrive’.

However, a motion construction with a verb lexicalizing a less specific direction cannot precisely identify the figure’s location with respect to the ground. Consider the motion event that involves dao ‘arrive’ and fangzi ‘house’. Since a house has an interior and exterior, and since a figure can start moving from either the interior or exterior of the house, dao fangzi arrive house fails to identify whether the figure arrives inside or outside of the house. Therefore, (14a), repeated here in (25), is not acceptable.

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

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

(26) Xiaohai dao-le fangzi-li/wai child arrive-ASP house-inside/outside

‘The child went into/out of the house.’

5.1 The specification of path in path verbs

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

As shown in previous sections, jin ‘enter’ and chu ‘exit’ specify paths into or out of an enclosed region. Entities with boundaries that can distinguish their interior space from exterior space usually can be treated as regions, including both three-dimensional entities (e.g., containers, rooms, boxes) and two-dimensional entities (e.g., countries, yards) (cf. Svorou 1994:15). The direction of motion lexicalized in jin and chu presuppose a bounded region to be the goal and source of 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 com-
plement, 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 (re-
ferred to as “vertical orientation” by Choi-Jonin and Sarda 2007), including
moving up to and down from a location. The specific directions of motion de-
scribed 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 loca-
tion, 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 de-
noted 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, local-
izers (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
region, although the location or region may have accessible space for going down or going into, as in (29b).

(29) a. shang zhuozi
    ascend table
    ‘go up to the table’

b. *shang zhuozi-xia/li
    ascend table-under/inside
    #go up under/into [a drawer or a crack of] the table’ (intended meaning)

In contrast, as pointed out above, dao ‘arrive’ is much less specific about its path. When dao takes a common noun, e.g., zhuozi ‘table’, as in (30a), the construction is not explicit about the figure’s location with respect to the table because the figure could arrive at either the top of, on the bottom of or any other spatial domains of a table. Therefore, a localizer is necessary to further specify the destination of the motion, as in (30b).

(30) a. *dao zhuozi
    arrive table

b. dao zhuozi-shang/xia
    arrive table-on.top.of/under
    ‘go onto/under the table’

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

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

5 For convenience, this paper uses one monosyllabic localizer to represent all the different forms of localizers expressing the same search domain found in the corpus, e.g., -shang ‘on’ covers -shang ‘on, up’, -shangmian (lit. ‘on-face’), -shangtour (lit. ‘on-head’) and -shangbian (lit. ‘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’.
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’
In contrast, when the deictic center’s location is known, a localizer is optional. For instance, as shown in (33), the figure (and the speaker) was originally located outside of Pantani’s room; and she assumed Pantani to be in the room and then went inside the room. In this sentence, the spatial relationships among the figure, Pantani, and the room are explicit, thus making -li ‘inside’ unnecessary.

(33) youyu dangtian henchang shijian meiyou kan-dao Pantani, because that.day very.long time NEG see-arrive Pantani suoyi qu ta fangjian chakan so go his room check ‘[I] went to his room for a check because [I] had not seen Pantani for a very long time on that day.’ (PKU Corpus)

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

(34) a. *jin zhuozi-shang
    enter table-up

     b. hui zhuozi-*(shang)
    return table-up

     ‘return to the top of the table’

(35) a. *shang zhuozi-li
    Ascend table-inside

     b. hui zhuozi-*(li)
    return table-inside

     ‘return to the inside (e.g., a drawer) of the table’

As shown above, although all path verbs lexicalize certain paths, they differ from 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
co-occur with the noun denoting a table, *shang* ‘on top of’ appears most frequently in a corpus investigation.

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.

(36) jin/lai/dao youju
     enter/come/arrive post.office
     ‘enter/come to/arrive at the post office’

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.

(37) a. Xiaohai qu xuexiao le
    child go school ASP
    ‘The child went to the school [to study].’

    b. Xiaohai baba qu xuexiao-li le
       child dad go school-inside ASP
       ‘The child’s dad went to the school.’

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
    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
    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>
<thead>
<tr>
<th>Common NPs</th>
<th><em>jin</em> ‘enter’</th>
<th><em>chu</em> ‘exit’</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NP with no</td>
<td>NP with a</td>
</tr>
<tr>
<td></td>
<td>localizer</td>
<td>localizer -li</td>
</tr>
<tr>
<td></td>
<td>‘inside’</td>
<td>‘inside’</td>
</tr>
<tr>
<td><em>fangjian</em>‘room’</td>
<td>237 (88.8%)</td>
<td>30 (11.2%)</td>
</tr>
<tr>
<td><em>yuanzi</em> ‘yard’</td>
<td>94 (81%)</td>
<td>22 (19%)</td>
</tr>
<tr>
<td><em>dalou</em> ‘building’</td>
<td>26 (100%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td><em>dianti</em> ‘elevator’</td>
<td>34 (97.1%)</td>
<td>1 (2.9%)</td>
</tr>
<tr>
<td><em>qiche</em> ‘car’</td>
<td>39 (95.1%)</td>
<td>2 (4.9%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>430 (88.7%)</strong></td>
<td><strong>55 (11.3%)</strong></td>
</tr>
</tbody>
</table>
separate their interior and exterior spaces; in fact, their interior spaces are more salient because humans usually carry out activities in these spaces. As shown in Table 1, these nouns more often do not co-occur with localizers when they are taken as complements by the path verbs jin ‘enter’ and chu ‘exit’.

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

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

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

<table>
<thead>
<tr>
<th>Common NPs</th>
<th>shang ‘ascend’</th>
<th>xia ‘descend’</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NP with no</td>
<td>NP with a</td>
</tr>
<tr>
<td></td>
<td>localizer</td>
<td>localizer -shang</td>
</tr>
<tr>
<td></td>
<td>‘on top of’</td>
<td>‘on top of’</td>
</tr>
<tr>
<td>dengzi ‘stool’</td>
<td>14 (100%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>zhuozi ‘table’</td>
<td>13 (100%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>erlou ‘2nd floor’</td>
<td>58 (100%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>tizi ‘ladder’</td>
<td>38 (100%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>guitai ‘counter’</td>
<td>65 (98.5%)</td>
<td>1 (1.5%)</td>
</tr>
<tr>
<td>Total</td>
<td>188 (99.5%)</td>
<td>1 (0.5%)</td>
</tr>
</tbody>
</table>
6 “Counterexamples” to the Localizer Condition

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.

\[(40) \begin{align*}
  a. \text{Ruguo ni shi mayi [\ldots] ni pa-shang zhuozi,} \\
  \text{if you are ant you climb-ascend table} \\
  \text{pa-jin wan-li} \\
  \text{climb-enter bowl-inside} \\
  \text{‘If you are an ant, \ldots . You climb up to the table and climb into the bowl.’} \\
  \\
  b. *pa-jin wan} \\
  \text{climb-enter bowl}
\end{align*}\]

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.

\[(41) \begin{align*}
  \text{Ta dai-zhe wo zhankai yichang fengkuang de zhuizhu,} \\
  \text{It lead-DUR me start one.CLF crazy MOD chase} \\
  \text{Cong dajie dao xiaogang you dao dajie,} \\
  \text{From big.street arrive small.alley again arrive big.street} \\
  \text{chuanguo Kuisite gongyuan, yilu lai-dao Malina Gang} \\
  \text{cross Crest Park all.the.way come-arrive Marina port}
\end{align*}\]
‘It took me to start a crazy chase, from the big street to the small alley, and then to the big street, passed the Crest Park, and came all the way to the Marina Port.’

This section explains why motion constructions such as (40) and (41) exist. I propose that these exceptions do not challenge the Localizer Condition, because they result from the number of syllables in the common noun, as well as pragmatic motivations.

### 6.1 Number of syllables in a common noun ground NP

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

![Figure 2: Corpus data contrasting the frequencies of monosyllabic and disyllabic ground NPs with and without a localizer](image)
‘sea, big sea’. When they function as the complements to the path verb jin ‘enter’, the monosyllabic che ‘car’ and hai ‘sea’ co-occur with a localizer in almost all instances, whereas the disyllabic chezi ‘car’ and dahai ‘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., jin shui enter water, shang shan ascend mountain and xia shui 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, xia shui descend water can also refer to the launching of a newly produced boat or becoming involved in evildoing. However, when the noun shui ‘water’ co-occurs with li ‘inside’, the construction xia shui-li ‘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 tiao ‘jump’ occurs before the path verb jin ‘enter’ in jin shui ‘go into the water’, then a localizer li ‘inside’ must occur with the monosyllabic noun shui ‘water’.

(42) a. jin shui
   enter water
   ‘go into the water/something is filled with water’

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

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

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

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

b. *Cainong-men jiang* . . . *Tuolaji Tingfang zai*  
vegetable.peasant-PL OBJ.M tractor park.put at 
cunwei dayuan menkou, zou jin  
village.administration big.yard door.mouth walk enter 
*yuanzi-li*  
yard-inside  
‘The vegetable peasants parked their tractors at the outside the yard 
door of the village administration building, and [they] walked into the 
yard.’
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, nian ren cong dajie dao xiaogang you dao dajie, chuanguo Kuisite gongyuan, yilu lai-dao Malina Gang, ‘It took me to start a crazy chase, from the big street to the small alley, and then to the big street, passed the Crest Park, and came all the way to the Marina Port.’


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-
ized in the path verb. Furthermore, the use of localizers in common noun ground NPs is regulated by the condition that the information conveyed in the path verb and the ground NP must be sufficiently specific so as to identify the figure’s final location in relation to the ground. Although this constraint and condition are motivated with Chinese data, they would be expected to hold in other languages. Previous studies have paid little attention to the omission of localizers in the ground NPs of motion constructions, but there are indeed some languages showing this phenomenon and the Compatibility Constraint, and even both the Compatibility Constraint and Localizer Condition, appear to be operative in them as well. Among these languages, some motion verbs in Japanese and French are found to impose strong restriction on the ground they take, and thus only select grounds that are compatible with the directions lexicalized in these verbs. In addition, motion constructions in Likpe and Korean obey both the Compatibility Constraint and Localizer Condition just like Chinese motion constructions. Furthermore, this constraint and condition are also expected to hold in languages where the ground is a complement of a lexical category other than verb, e.g., prepositions.

### 7.1 Languages expressing a spatial relationship in a verb

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

\[(46)\]
\[
\begin{align*}
a. & \quad \text{Jun wa} \quad \text{kawa/michi} \quad \text{o watatta} \\
& \quad \text{Jun TOP river/street O cross-PAST} \\
& \quad \text{‘Jun crossed the river/street.’}
\end{align*}
\]

\[
\begin{align*}
b. & \quad \text{Jun wa} \quad \text{heya/yama} \quad \text{o watatta} \\
& \quad \text{Jun TOP room/mountain O cross-PAST} \\
& \quad \text{‘Jun crossed the room/mountain.’ (intended meaning)}
\end{align*}
\]

(Muehleisen and Imai 1997: 332)

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

\[(47)\]
(47) a. Ikkou wa *hakone no yama o koeta
   group TOP Hakone GEN mountain O go-over-PAST
   ‘The group went over the Hakone Mountains.’

   b. ??Ikkou wa kawa o koeta
   group TOP river O go-over-PAST
   ‘The group crossed the river.’

   c. *Ikkou wa torii o koeta
   group TOP shrine-gate O go-over-PAST
   ‘The group went through the shrine gate.’ (intended meaning)

(Muehleisen and Imai 1997: 334)

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

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

   ‘Paul is moving up/down the stairs/the slope/the hillside.’

   b. Paul monte/descend ??la montagne/ ??l’arbre/ ??le poteau électrique.
   ‘Paul is moving up/down the mountain/tree/electric pole.’ (intended meaning)

(Choi-Jonin and Sarda 2007: 141)

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

Likpe is a Central Togo language mainly spoken in the northern part of the Volta region of Ghana. According to Ameka (1999), Likpe uses verbs to express the spatial relationship between the figure and the ground, and postpositions to express the search domain, as shown in (49). Therefore, postpositions in Likpe function in the same way as localizers in Chinese.
Ameka (1999) observes that Likpe postpositions are not used in all spatial constructions. He proposes two conditions for their omission. One is that postpositions are unnecessary whenever the verb and the ground can be “interpreted stereotypically” (Ameka 1999: 26). By stereotypical interpretation, Ameka provides an example showing that when the figure is in a ground with a containing region (e.g., a building), the postposition expressing ‘inside’ is not expressed because the figure can be typically understood to be located inside of the ground, as in (50).

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

The second condition is relevant to the direction specified as part of a verb’s lexical meaning. Postpositions are unnecessary if the search domain is indicated by the lexical meaning of the verb (and context). For instance, Ameka points out that the verb táká ‘make contact with supporting surface’ does not require the ground to take the postposition a-suә ‘surface’ in order to express an ‘on horizontal surface’ relation because the verb already entails the meaning of surface contact, as in (51).

(51) ku-kwә ko-mә́ tә́kә́ li shelf  
CM-book AGR-DET V LOC shelf  
‘The book is on the shelf.’  
(Ameka 1999: 26)

These two conditions in Likpe are comparable to the condition of using localizers in Chinese. That is, a postposition or localizer is not needed when the figure’s location can be inferred from the verb and the nature of the ground. Ameka further observes that with these verbs and grounds, a postposition is only used to emphasize 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 *dilla-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-a-ga-n-da*
   
   Insoo  
   house-LOC  
   move.in-CS-go-PST-TS
   
   ‘Insoo is entering the house.’

b. *Insu-ga*  
   *c*ęgsaj-*mit-e*  
   *dil-a-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 *y*i ‘top’ in (54).

(53) *Insu-ga*  
   *namu-e*  
   *oll-a-ga-s’-ә*
   
   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*  
   *cap’an-qi-e*  
   *oll-a-ga-s’-ә*
   
   Mimi-NOM  
   keyboard-top-LOC  
   move.up-CS-go-PAST-TS
   
   ‘Mimi climbed on the keyboard.’ (Mimi is a cat)

b. ??*Mimi-ga*  
   *cap’an-e*  
   *oll-a-ga-s’-ә*
   
   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.
7.2 Languages expressing a spatial relationship in a preposition

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

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

(55) Keche yan xiaolu jixu xingjin
    guest.car along small.road continue advance
    ‘The guest car continues travelling forward along the small road.’
    (PKU Corpus)

In French, although some path verbs can take ground NPs directly, as shown in (48), the ground NPs most frequently appear as the complements to PPs (Choi-Jonin and Sarda 2007). In addition, these ground NPs also obey the Localizer Condition in that they must co-occur with localizers when the figure’s location cannot be easily inferred from the preposition and the ground. For instance, according to Choi-Jonin and Sarda, the de ‘from’ PP of the path verb sortir ‘move out’ can only directly select grounds with an interior, as in (56a), whereas a ground without an interior has to take a preposition which is able to define an interior, as in (56b).

(56) a. Paul sort de la maison/de la boîte.
    ‘Paul is going out of the house/the night club.’
 b. Paul sort de derrière la porte/de dessous la table.
    ‘Paul is coming out from behind the door/from under the table.’
    (Choi-Jonin and Sarda 2007: 136)
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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References


Appendix. List of abbreviations used in the paper

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