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Arnaud Arslangul, Marzena Watorek

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Arnaud Arslangul* and Marzena Watorek

Locative phrase and descriptive discourse in L2 Chinese

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Abstract: This study examines the way in which French-speaking learners of L2 Chinese construct a type of discourse called *static spatial description*. It involves the analysis of an oral corpus collected from two groups of native speakers of Chinese and French, and two groups of learners of L2 Chinese at two proficiency levels (low and intermediate). The data collected consist of the description of a poster. The results show that linguistic devices used in Chinese and French to encode the locative phrase and its syntactic functions have an impact on the presence and placement of the locative in utterances encoding spatial localization. These properties in turn influence the way in which the informational content develops across the utterances in the discourse. There is a clear development of proficiency between the two L2 groups. However, intermediate learners are not yet able to organize information on the discourse level like native Chinese speakers do.

Keywords: descriptive discourse; existential construction; localizer; locative phrase; static spatial localization

摘要: 本研究分析了母语为法语的学习者如何用汉语进行“静态空间描述”。为此本文收集了汉、法两种口语语料，被试者分为四组：汉语母语者、法语母语者以及两组法语为母语的汉语学习者（初级组和中级组）。语料收集使用的测试材料为一张街景图。研究表明，母语分别为汉语和法语的被试者所使用的空间短语类型与语法功能都有所不同，此差异在语篇层面上造成两组被试者之间主位推进模式不同。两组学习者之间的语言水平亦有明显差别，但中级组在语篇中的信息组织与汉语母语者相比，仍有较大的差异。

关键词: 静态空间描述; 存在句; 静态空间关系; 空间短语; 方位词

***Corresponding author: Arnaud Arslangul**, CRLAO UMR 8563 & Inalco, Département d'Études chinoises; 65, rue des Grands Moulins CS21351 75214, Paris Cedex 13, France,
E-mail: arnaud.arslangul@inalco.fr

Marzena Watorek, Structures Formelles du Langage UMR 7023 & Université Paris 8 Département Sciences du langage, Paris, France, E-mail: watorek@univ-paris8.fr

1 Introduction

This study focuses on the construction of descriptive discourse, in which the expression of spatial location is central to the context. We analyze how spatial localization is expressed in French, standard Chinese, and Chinese as a second language (L2) in a discourse we call *static spatial description*. We analyze the linguistic structures used to encode spatial localization, taking into account the interaction between three levels (Carroll and von Stutterheim 1993): the morpho-syntactic level, the conceptual level (static space), and the discourse level (including topic/focus information structure and organization of information in the text).

Many studies of static spatial descriptions have shown that the existential construction, when such a linguistic device is available in the language of production, is preferred in this type of discourse. This tendency is evident in French, English, Italian and Spanish (cf. Carroll and von Stutterheim 1993, 1997; Carroll et al. 2000; Hendriks and Watorek 2008; Watorek 2003). The main contribution of this paper is to complete the analysis of these previous works with L2 Chinese data.

Our study falls in line with the psycholinguistic approach of Levelt's (1989) model of language production that focuses on the possible influence of language structure on the organization and conceptualization of the intended message in a complex communicative task. Thus, we argue that the conceptual choices of speakers could be conditioned by the morpho-syntactic rules of a given language.

In this article, we compare descriptive discourses produced by native speakers of French and Chinese, and French-speaking learners of L2 Chinese, showing that the morpho-syntactic level, which partially involves different rules in the two languages, leads to differences on the discourse level (reference maintenance) and on the conceptual level (the domains of space and entities), and that the differences between French and Chinese influence the productions of L2 Chinese learners.

This article is divided into three main sections. We first present the theoretical framework of our study (Section 2). More specifically, the discourse analysis model used to characterize static spatial descriptions is presented in Section 2.1; the theoretical framework for our analysis of the space domain is presented in Section 2.2, while Section 2.3 provides a comparative overview of the linguistic systems of Chinese and French. Section 3 presents the method of data collection used in this study. We present our results in Section 4 and discuss them in Section 5, followed by our conclusions.

2 Theoretical framework

2.1 Language production and the *quaestio* model

According to Levelt's (1989) psycholinguistic model of language production, the construction of a discourse is a process, going from the conceptualization of the message to be transmitted, through its grammatical encoding, to the representation of the discourse ready to be articulated. The speaker, facing a complex communicative task, must first select the relevant information and must put their message into a linear order in the form of a conceptual structure, called a *preverbal message*. Then, during the grammatical and phonological encoding phase, the speaker translates the conceptual structure into a linguistic structure, which gives rise to internal discourse. This can then be realized during the articulation phase by the respiratory, phonatory, and articulatory systems.

This model suggests that the structure of the language in which the speaker produces his or her discourse may have an impact on the selection and linearization of the information expressed, and the structure of the preverbal message may be marked by the characteristics of the language of production.

The process of discourse construction as envisaged by this psycholinguistic model of production can be described through Klein and von Stutterheim's (1991) discourse analysis model. According to this model, information selection and packaging in context is determined by perspective-driven processes of information organization. Once the perspective has been selected, the body of information produced is viewed as an organized structure. Klein and von Stutterheim posit that any coherent discourse answers a global question, implicit or explicit, called the *quaestio*, which constitutes the interpretation that the speaker gives to the communicative situation. The *quaestio*, which is reconstructed and formalized based on speaker performance, determines the structure of the discourse.

The *quaestio* constrains the global organization of discourse, distinguishing between the central message and marginal information, such that utterances that respond directly to the *quaestio* are part of the foreground of the discourse, while those that bear no direct relevance to it are part of the background.

The *quaestio* also determines the topic/focus information structure of foreground utterances. The topic component of an utterance is presupposed by the *quaestio* and corresponds to one or more items of information given in it. The focus

component corresponds to information which specifies the answer to the *quaestio*. Topic and focus are components of the meaning of the utterance, and must be distinguished from the linguistic constituents encoding this meaning, namely the topic and focus expression.¹

To produce coherent discourse, the speaker must organize the information to be transmitted in five conceptual domains, called referential domains. They are: time, space, entities (people or objects), predication (actions, events or states), and modality. According to the *quaestio*, some or all of these referential areas will be involved in the discourse.

Information from different referential domains relevant for a given type of discourse accumulates and develops from one utterance to another through the discourse; this constitutes the referential movement. Thus, in each of the referential domains concerned, the relevant information is first introduced, and then maintained or changed throughout discourse, from one utterance to another.

In the works cited in the previous section, a static spatial description is defined as a discourse answering the *quaestio*: *What is in L?*, where *L* stands for *location* and refers to the entire space described (a poster, in the current study). This type of discourse therefore concerns two referential domains, space and entities. These serve to delimit the region of space which constitutes the topic information, assumed by the *quaestio*. The domain of entities is also found in the focus of foreground utterances, where it is represented by the localized items. Information structure is encoded by different linguistic devices depending on language. Previous work (Arslangul and Watorek 2020) showed that French and Chinese speakers clearly prefer the existential construction in this type of discourse, as illustrated in (1).²

1 The definition of the topic/focus information structure is controversial, and it varies according to different approaches. Our work belongs to a tradition of studies that consider the topic (as opposed to the focus) at the communicative level, which refers to the ‘new-given contract’ between speaker and addressee. Any new information introduced in focus is linked to information known by the addressee (the topic). The ‘given’ character of the information is treated in terms of *salience* by Chafe (1994), *shared knowledge* by Haviland and Clark (1974), *assumed familiarity* by Prince (1981) or *aboutness* by Lambrecht (1994). Topic information that is accessible, contextually appropriate and pragmatically presupposed conveys discourse referents about which the speaker asserts something (the focus). The topic/focus structure can be identified at the utterance level and at the discourse level, which is mentioned by Givón (1979, 1984) or Lambrecht (1994), and developed by the *quaestio* model.

2 Abbreviations: CL classifier, DUR durative aspect, LOC localizer, N noun, NP noun phrase, P preposition, PP prepositional phrase, REL Relatum, SUB subordinator, TH Theme, TOP topic, Vexist existential verb.

- (1) a. *Au centre de la place il y a une fontaine.*
 at.the center of the square there.is a fountain
- b. 广场中间有一个喷泉。
guǎngchǎng zhōngjiān yǒu yī-gè pēnquán
 square middle exist one-CL fountain
 Space Entity
 Topic Focus
 ‘There is a fountain in the center of the square.’

2.2 Spatial relations

The concept of spatial relations has been addressed by various scholars in cognitive linguistics (Talmy 2000; Vandeloise 1986, *inter alia*). In our study, we adopt the *linguistically accessible* notion of space (Carroll and Becker 1993: Ch. 4; Klein and Nüse 1997). It underlies simple and common statements, which are the basis of everyday perceptions and behaviors. The term *space* in this context refers to *normal perceptual space*. It includes units that can be called *region of space*, which can be identified through the entities that occupy them, although the two are distinct: “objects occupy a certain place in space for a specific time span and thereby allow for the identification of places” (Becker and Carroll 1997: 18).

Spatial relations are typically established between at least two entities. In (2a), the location of an entity *Peter* is determined with respect to that of another entity, *the garden*. Following Carroll and Becker (1993), we will call the entity being localized, the *theme*, and the region of space where it is localized, the *relatum*. The relation between the theme and the relatum can be static or dynamic. A static relation implies that the theme remains in a single specific region of space (2a). A dynamic relation implies motion within the boundaries of the relatum (2b) or boundary crossing (2c).

- (2) a. Peter is in the garden.
 b. Peter runs in the garden.
 c. Peter leaves the garden.

In this study, the foreground of the discourse typically involves static locations.

2.3 The existential construction in Chinese and French

2.3.1 Chinese

The locative phrase in Chinese is encoded using elements from a range of syntactic categories: locative pronouns, nouns, locative particles, and prepositions (Pan 2003; Zhang and Fan 2010).

There are two locative pronouns in Chinese, *zhèlǐ* 这里 or *zhèr* 这儿 ‘here’ and *nàlǐ* 那里 or *nàr* 那儿 ‘there’, which designate a region of space, respectively close and distant from the deictic reference point fixed by the speaker.

Five types of nouns can appear in locative phrases. Entity nouns refer to material objects (*zhuōzi* 桌子 ‘table’, *shù* 树 ‘tree’). Common place nouns refer to categories of places (*yěwài* 野外 ‘countryside’, *nèidì* 内地 ‘inland’). Proper place nouns (or toponyms) refer to unique places (*Yàzhōu* 亚洲 ‘Asia’, *Zhōngguó* 中国 ‘China’). Mixed place nouns refer to either an entity or a place depending on the context (*fànguǎn* 饭馆 ‘restaurant’, *xuéxiào* 学校 ‘school’) (Chappell and Peyraube 2013: 16; Chu and Chi 2005: 39). Finally, the locative nouns refer to a region of space (*pángbiān* 旁边 ‘beside’, *lǐtou* 里头 ‘inside’) (Cai 2010: 10; Fang 2002: 26). These are disyllabic nouns that constitute a closed class of about 40 items (Liu et al. 2001: 55; Zhu 1982: 44); they are mostly composed of a monosyllabic locative particle and a prefix (*yǐ-* 以 or *zhī-* 之) or a suffix (*-bian* 边, *-tou* 头 or *-mian* 面) (Ma and Zheng 2008; Peyraube 2003). The distinction between the four types of entity nouns and place nouns is based on their possibility to take the function of complement of the prepositions *zài* 在 ‘at’ and *dào* 到 ‘to’ and to be followed by a locative noun or a locative particle (Guo 2010: 206–217).

Locative particles constitute a second closed class. They are mostly monosyllabic (*lǐ* 里 ‘inside’, *shàng* 上 ‘on’), and more rarely disyllabic (*zhījiān* 之间 ‘between’) (Fang 2004). Because of their formal resemblance to locative nouns, these two categories are often seen as one word class called *localizer* in grammar books (Chao 1968: 528; Ding 1961: 73; Li and Thompson 1981: 391). However, while locative nouns are independent words, locative particles are bound morphemes; they are postposed after entity nouns or mixed place nouns (Fang 2004; Li 2019). The phrase formed, refers to a relatum-entity which delimits a region of space (*gōngyuán lǐ* 公园里 ‘in the park’, *zhuōzi shàng* 桌子上 ‘on the table’).

The syntactic category to which locative particles belong is subject to debate. Some scholars consider these to be nouns (Huang et al. 2009: 13–21; Liu et al. 2001: 50), others postpositions (Ernst 1998; Djamouri et al. 2013). However, Liu (1998) shows that they are attached at the end of the entire noun phrase to which they relate, and are also prosodically dependent, often pronounced in a neutral tone. Therefore, they should be considered as clitics (see also Li 2019).

Jiang (2016) performed a corpus analysis of locative phrases in Chinese, comprising more than three thousand occurrences of existential constructions, taken from a set of 20 contemporary literary works. The study shows that the most frequent preposition in the locative phrase of existential constructions is by far *zài* 在 ‘at’. It expresses a location without specifying the spatial relation which links the theme to the relatum. This relation is expressed by a locative noun, a locative particle, or directly by the semantics of the noun used. However, Jiang (2016:

50–51) also clearly shows that the locative phrase of the existential construction in Chinese dominantly occurs without a preposition.

There is no consensus with regard to the conditions of appearance for *zài* 在 ‘at’. Some argue that its presence is optional in most cases (Chen 2001: 22; Zhang and Fan 2010: 24), while Pan and Rong (2006) present four conditions under which this preposition are obligatory: the locative phrase is preceded by (1) an adverb or (2) a conjunction, the noun or noun phrase is (3) indefinite or (4) assumed by a proper place nouns. These conditions are completely absent from our corpus, given the nature of the static description discourse in our study. On the basis of Pan and Rong (2006), we can therefore say that, at least as far as our data is concerned, the preposition *zài* 在 ‘at’ is always optional in the locative phrase.

In Chinese, the locative phrase can refer only to the space domain using the phrase ‘(Prep. +) Place noun or Locative noun or Locative pronoun’:

- (3) (在) 市中心有几家餐馆。
 (zài) shìzhōngxīn yǒu jǐ-jia cānguǎn
 (at) downtown exist few-CL restaurant
 ‘There are a few restaurants in the city center.’
- (4) 后边有地铁站。
 hòubian yǒu dìtiě zhàn
 behind exist subway.station
 ‘There is a metro station behind.’
- (5) (在) 那里有一个人。
 (zài) nàlǐ yǒu yī-gè rén
 (at) there exist one-CL person
 ‘There is a someone over there.’

It is also possible to refer simultaneously to both the entities and space domains with the phrase ‘(Prep. +) Entity noun or Place noun + Localizer’:

- (6) (在) 银行对面有一个公交车站。
 (zài) yínháng duìmian yǒu yī-gè gōngjiāo chēzhàn
 (at) bank in.front exist one-CL bus.station
 ‘There is a bus station in front of the bank.’

The question of the syntactic function of the locative phrase has been debated at length in Chinese linguistics. There is now a consensus to consider it as a subject and not an adjunct (Chen 2001: 27; Chen 2002: 111; Pan 2003: 43; Paul et al. 2019; Song 1984; Zhang 1990; Zhu 1982: 98).

The verb of the existential construction is *yǒu* 有 ‘exist’. The copula *shì* 是 ‘be’ can also be used but it establishes more a relation of identity than of existence and leads to the interpretation that there is nothing but this particular entity in this region of space.

The localized entity is encoded by a noun phrase; it often contains a quantifier determiner which expresses its indefinite nature (as in example 6, *yī-gè gōngjiāo chēzhàn* 一个公交车站 ‘one-CL bus station’). It assumes the object function.

The syntactic structure of the existential construction is very rigid in Chinese. Its three parts are always organized in the same order: a locative phrase, followed by a verb, and finally, the localized entity.

2.3.2 French

The syntactic structure of the existential construction in French is not as rigid as its Chinese counterpart. The locative phrase is encoded by prepositions, nouns, and adverbs (Borillo 1998: Ch. 5-7).

Spatial prepositions can be divided into two groups: simple and complex prepositions (Borillo 1998: 81–85). Simple prepositions constitute a small group of some 20 items, such as *à* ‘at’, *dans* ‘in’, *sur* ‘on’, as in (7). The group of complex prepositions is much more extensive (over 200 items), such as, *au milieu de* ‘in the middle of’, *à côté de* ‘next to’, *aux environs de* ‘around’, as in (8).

- (7) *Il y a un livre sur la table.*
 there.is a book on the table
 ‘There is a book on the table.’

- (8) *Il y a une table au milieu de la pièce.*
 there.is a table in.the.middle.of the room
 ‘There is a table in the middle of the room.’

This type of locative phrase, ‘Prep. + Noun’, refers to both the space and entities domains.

Borillo (1998: 3–5) distinguishes three categories of nouns that can serve as complement to the prepositions discussed above: place nouns (either proper nouns: *France*, *Loire*, *Tour Eiffel*, or common nouns: *colline* ‘hill’, *rivière* ‘river’, *plage* ‘beach’), nouns designating objects (*table* ‘table’, *cage* ‘cage’, *bocal* ‘jar’), and nouns designating a variety of mixed entities which are sometimes considered entities and sometimes places (*maison* ‘house’, *chambre* ‘bedroom’, *gare* ‘station’).

Locative adverbs can also be divided into two groups: simple adverbs like *ici* ‘here’, *ailleurs* ‘elsewhere’, *dehors* ‘outside’, *alentour* ‘around’, *où* ‘where’ (9) and complex adverbs, for example *quelque part* ‘somewhere’, *là-dessus* ‘above’, *au-dehors* ‘outside’ (10).

- (9) *Il y a quelqu’un dehors.*
 there.is someone outside
 ‘There is someone outside.’

- (10) *Il y a une chaise là-bas.*
 there.is a chair over.there
 ‘There is a chair over there.’

Unlike prepositional phrases, adverbs refer only to the space domain. Thus, prepositions require the explicit mention of the entity delimiting a region of space, while adverbs do not; they only establish global divisions of the space described. This is what Carroll and von Stutterheim (1993) call *transitive* and *intransitive* locative expressions, respectively. Furthermore, Watorek (1996: 129–138) notes that among these transitive expressions, some prepositional phrases (11) and adverbs (12) are optional. This means that reference to an entity is not obligatory when the relevant information is accessible in the discourse context. Such prepositions that are used without any complement are termed *orphan* prepositions by Borillo (1998: 34).

- (11) *Il y a une chaise à côté [de la table].*
 there.is a chair beside of the table
 ‘There is a chair beside [the table].’

- (12) *Derrière [la table] il y a une chaise.*
 behind the table there.is a chair
 ‘Behind [the table] there is a chair.’

As an adjunct of the existential verb, the locative phrase in French is optional and mobile; it can be omitted or occupy different syntactic positions in the sentence, after the localized entity (11) or before the verb (12).

The verb in this existential construction is always *y avoir* ‘there be’. Since there is no agreement between the verb and its nominal sequence, the nominal is considered the object of the existential predicate. Agreement is established with the expletive subject *il* ‘it’ (13). The adverb pronoun *y* ‘there’ is a grammaticalized locative which has lost its anaphoric value and is incorporated into the verbal lexeme (Meulleman 2009: 23).

- (13) *Il y a des chaises dans la classe.*
 there.is some chairs in the classroom
 ‘There are chairs in the classroom.’

According to Meulleman (2009: 134 and 160), who analyzes the locative phrase of the existential construction in French in a contemporary journalistic corpus of more than two thousand occurrences, the locative phrase is often implicit and is much more frequently expressed in a prepositional phrase than in an adverb phrase.

The localized entity in French is regularly expressed by a noun phrase (determiner + noun) taking the object role.

3 Method

The participants in this study fall into two groups of native speakers (Chinese and French) and two groups of French-speaking learners of L2 Chinese, each group consisting of 18 speakers ($N = 72$).

The French native speaker corpus (Fr) was collected from university students in Paris (12 women and 6 men). The Chinese native speaker corpus (Ch) was collected from speakers in Shenzhen and from Chinese students in a university in Paris (16 women and 2 men).³ Data of French-speaking Chinese learners were collected from students of Chinese at the National Institute of Oriental Languages and Civilizations in Paris. These learners are divided into a low-level (Low) group (13 women and 5 men), and an intermediate-level (Int) group (13 women and 5 men). L2 Chinese levels were estimated based on two parameters: the students’ scores obtained in their course and the volume of hours of study in their programs. The low-level group received 400 h of training at the end of their first year bachelor’s degree, their average level corresponding to A2 on the CEFR scale; the intermediate group received 860 h at the end of the third year of their bachelor’s degree, which corresponds to level B2.

The stimulus used in the task to elicit verbal productions is a poster with a multidimensional spatial configuration. It represents a city center in Switzerland consisting of a square with many people and other items (such as a kiosk, trees, a bus stop, a fountain), as well as a road and buildings.⁴

³ All Chinese native speakers have a high level of education; 15 of them speak only standard Chinese, three of them also speak another Sinitic language (Southern Min); Chinese students in Paris had very low proficiency in French at that time.

⁴ From Müller (1976). It was first used by Carrol and von Stutterheim (1993).

The same data collection procedure was used for all groups. The interviewer asked each informant individually to describe the content of the poster in their L1 or L2. The informant is instructed to address the description to an interlocutor who is not present. This interlocutor does not know the drawing, and has no visual access to it, but will have to draw the poster based on the informant's description. For this reason, the informant must be particularly clear about the location of the entities on the poster. The interviewer does not intervene during the task.

The corpus was recorded, and then transcribed with the CLAN software of the CHILDES system (MacWhinney 2020). The responses are segmented into utterances according to the *quaestio* for this type of discourse (*What is in L?*). In total, 1,247 utterances of the discourse foreground were analyzed (Ch = 283, Fr = 474, Low = 212, Int = 305). Every utterance is coded along three levels of analysis, marking (a) on the morpho-syntactic level, the linguistic devices used to encode the locative phrase and their syntactic functions;⁵ (b) on the information level, the topic and focus components of the utterance; (c) on the discourse level, the referential movement, that is how the flow of information in the domains of space and entities is linked from one utterance to another through discourse. We consider here three types of referential movement (Klein and Perdue 1993: 23): transition from the previous topic to the next topic (*topic maintenance*), transition from the previous focus to the next topic (*focus shift*) and transition from a previous topic to the next topic (*topic reintroduction*).⁶

Based on the results of Arslangul and Watorek's study (2020), comparing static spatial descriptions produced by native speakers of Chinese and French, we know that the linguistic devices of these two languages influence the choice of information transmitted and the organization of discourse during the production of this complex verbal task.

We had three research questions in this study concerning the acquisition of L2 Chinese:

1. Are there differences between the two proficiency levels in the mastery of the linguistic devices used in the locative phrase in Chinese?
2. Are there differences between the two proficiency levels in the organization of information in discourse?
3. If so, what are these differences and what factors can explain them?

⁵ For the sake of clarity, unless noted otherwise, entity nouns and mixed nouns are grouped together under the generic term *noun* (N), while locative particles and locative nouns are grouped together under the term *localizer* (LOC).

⁶ In Daneš's (1974) theory of thematic progression, topic maintenance corresponds to *progression with a constant theme* and focus shift corresponds to *simple linear thematic progression*.

4 Results

4.1 Topic expression

4.1.1 Implicit locative phrases

When the same region of space is referred to in the topic of two or more successive utterances, co-referential locative phrases can be used and the speaker can decide to leave the topic expression implicit. The region of space described by the locative phrase *au milieu de la place* ‘in the middle of the square’ in (14a) is kept constant in the sequence of utterances without any explicit encoding in (14b-c).

- (14) a. [*Au milieu de la place*]_{TOP} *il y a des bancs.* (Fr)
 in.the.middle.of the square there.is some benches
 b. [\emptyset]_{TOP} *Il y a une fontaine.*
 there.is a fountain
 c. [\emptyset]_{TOP} *Un kiosque à journaux.*
 a newsstand

‘There are benches in the middle of the square; there is a fountain; a newspaper stand.’

We compared the use of implicit topic expression by the speakers of the four groups by applying a Welch’s one-way analysis of variance (ANOVA). The test showed a significant difference between the groups, $F(3, 37.6) = 23.39, p < 0.001, \eta^2 = 0.501$. Post-hoc tests (Games–Howell) gave the following results (cf. Table 1 and Figure 1): French speakers used an implicit topic more than Chinese speakers, while low-level learners used it more often than the other three groups; finally, intermediate-level learners showed no significant difference compared to Chinese speakers or French speakers.

Table 1: Implicit locative phrases.

	<i>M</i>	<i>SD</i>	95% CI	<i>p</i> value			
				Ch	Fr	Low	Int
Ch	0.249	0.176	[0.162, 0.337]	–	0.037	< 0.001	0.124
Fr	0.432	0.208	[0.328, 0.535]		–	< 0.001	0.982
Low	0.800	0.213	[0.694, 0.906]			–	< 0.001
Int	0.404	0.228	[0.291, 0.518]				–

Example (15) shows the tendency of low-level learners to leave the locative phrase implicit in their Chinese discourse.

- (15) a. 在这个街角里有一些人。(Low)
[zài zhè-gè jiējǎo=lǐ]_{TOP} yǒu yī-xiē rén
at this-CL street.corner=in exist one-CL person
- b. 有小孩子。
[Ø]_{TOP} yǒu xiǎoháizi
exist children
- c. 也有树。
[Ø]_{TOP} yě yǒu shù
also exist tree
- d. 有一个报亭。
[Ø]_{TOP} yǒu yī-gè bàotíng
exist one-CL newsstand
- e. 也有很多大楼。
[Ø]_{TOP} yě yǒu hěn duō dàlóu
also exist very many building
- ‘There are few people on this street corner; there are children; there are also trees; there is a newsstand; there are also many buildings.’

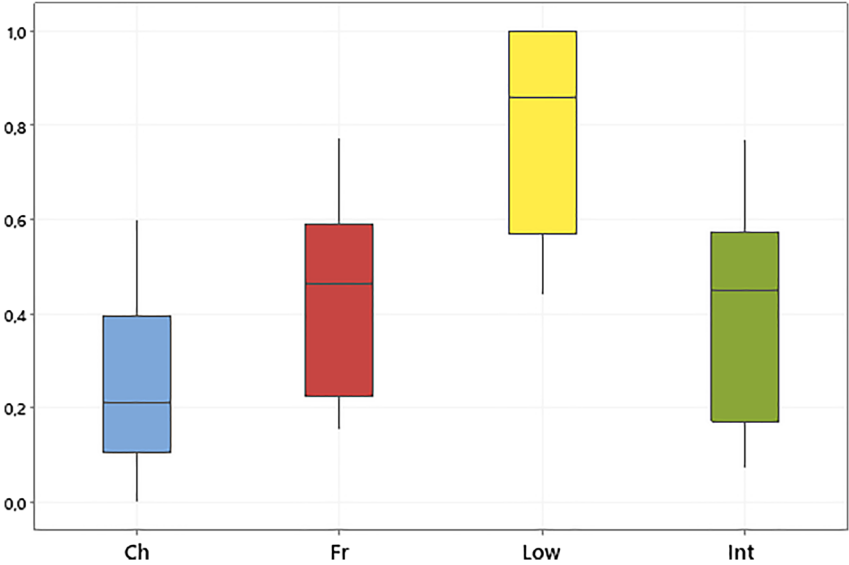


Figure 1: Implicit locative phrases.

4.1.2 Explicit locative phrases

When the topic expression is explicitly maintained, the locative phrase takes several forms. Among French speakers, it is mostly encoded by a prepositional phrase (41.4% of all utterances) and by an adverb or orphan preposition without reference to a relatum-entity (13.4%), as in (16–17).

- (16) *Sur cette place il y a un kiosque.* (Fr)
 on this square there.is a kiosk
 ‘There is a kiosk on this square.’

- (17) *Dedans il y a quelqu’un.* (Fr)
 inside there.is someone
 ‘There is someone inside.’

Analysis of the Chinese data followed Pan and Rong’s (2006) results, grouping together the locative phrases composed of a noun and a localizer, whether or not they were preceded by a preposition, as in (18–19).

- (18) 广场上有许多树。(Ch)
guǎngchǎng=shang yǒu hěnn duō shù
 square=on exist very many tree
 ‘There are many trees on the square.’

- (19) 在楼的前面有五棵树。(Ch)
zài lóu de qiánmian yǒu wǔ-kē shù
 at building SUB in.front exist five-CL tree
 ‘There are five trees in front of the building.’

We compared the use of this type of locative phrase among Chinese speakers and learners by applying a Welch’s one-way ANOVA. It showed a significant difference between the groups, $F(2, 33.9) = 24.96$, $p < 0.001$, $\eta^2 = 0.510$. Post-hoc tests (Games–Howell) gave the following results (cf. Table 2 and Figure 2): learners used this type of phrase significantly less than Chinese speakers, and there was no difference between the two groups of learners. This result means that the learners have difficulties encoding a noun with a localizer which establishes the spatial relation.

We can find in the data four other encodings of the locative phrase: a locative noun (20), a prepositional phrase with an entity noun or a mixed noun (21), a prepositional phrase with a locative noun (22), and a noun phrase (23).

Table 2: Locative phrase: ‘(P+)N + LOC’.

	<i>M</i>	<i>SD</i>	95% CI	<i>p</i> value		
				Ch	Low	Int
Ch	0.719	0.230	[0.604, 0.834]	–	< 0.001	< 0.001
Low	0.204	0.206	[0.102, 0.307]		–	0.059
Int	0.370	0.211	[0.265, 0.475]			–

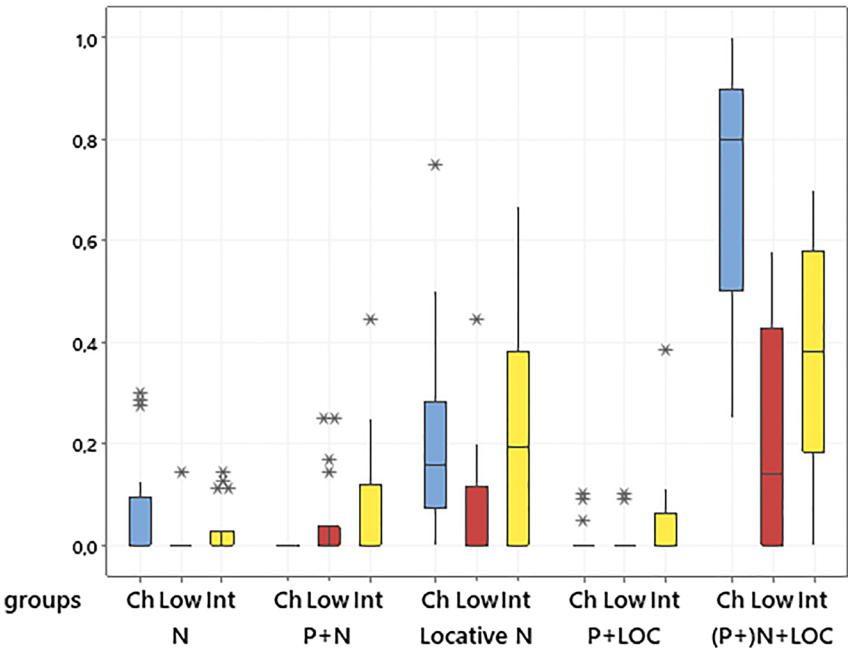


Figure 2: Structure of the explicit locative phrases.

- (20)

右边有一条路。(Int)
yòubiān yǒu yī-tiáo lù
right exist one-CL road
‘There is a road on the right.’
- (21)

在这个广场有五个树。(Int)
zài zhè-gè guǎngchǎng yǒu wǔ-gè shù
at this-CL square exist five-CL tree
‘There are five trees at this square.’

- (22) 在左边有一个巧克力商店。(Int)

zài zuǒbian yǒu yī-gè qiǎokèlì shāngdiàn
 at left exist one-CL chocolate shop
 ‘There is a chocolate shop on the left.’

- (23) 绿色那栋房子的一楼是咖啡厅。(Ch)

lǜsè nà-dòng fángzi de yīlóu shì kāfēitīng
 green that-CL building SUB first.floor be cafe
 ‘The first floor of that green building is a cafe.’

We compared the use of these phrases between Chinese speakers and learners by applying Mood’s median tests and pairwise comparisons with Mood tests, and the Bonferroni correction (significance level = 0.017) (cf. Figure 2). For the locative phrase composed by a locative noun (‘LOC’), the tests showed that low-level learners used it less than Chinese speakers ($\chi^2(2) = 7.11$, $p = 0.008$; Low: $Mdn = 0.000$, $SD = 0.118$; Ch: $Mdn = 0.158$, $SD = 0.197$). For the prepositional phrase with an entity noun or a mixed noun (‘P + N’), the test showed that the intermediate-level learners scored significantly higher than the Chinese speakers ($\chi^2(2) = 8.69$, $p = 0.003$; Int: $Mdn = 0.000$, $SD = 0.120$; Ch: $Mdn = 0.000$, $SD = 0.000$). For the prepositional phrase with a locative noun (‘P + LOC’), or for the noun phrase (‘N’), the Mood’s median tests showed no significant difference between the groups (respectively, $\chi^2(2) = 2.97$, $p = 0.227$, and $\chi^2(2) = 4.34$, $p = 0.114$).

4.2 Referential movement

Topic information relating to the region of space is introduced at the beginning of the description and then kept in the body of the discourse to ensure cohesion. In this section, we analyze three types of referential movement: topic maintenance, focus shift, and topic reintroduction.

4.2.1 Topic maintenance

The topical relatum-entity of the current utterance is identical to the topical relatum-entity of the preceding utterance. In this type of movement, the locative phrase can be explicit or implicit in both languages (24–25).

- (24) a. *Dans la place il y a cinq arbres.* (Fr)
 in the square there.is five trees
 REL 1 TH 1

- b.

Derrière

la

place

il y a

une

autre

dame.

behind

the

square

there.is

an

other

women

REL 1

TH 2

‘There are five trees on the square; there is another women behind the square.’
- (25)

a.

广场上有个雕像。(Ch)

guǎngchǎng=shang

yǒu

gè

diāoxiàng

square=on

exist

CL

statue

REL 1

TH 1
- b.

有一个报亭。

[Ø]_{Top}

yǒu

yī-gè

bàotíng

exist

one-CL

kiosk

REL 1

TH 2

‘There is a statue on the square; there is a kiosk.’

We performed a one-way ANOVA on this variable which showed a significant difference between the four groups of speakers, $F(3, 68) = 11.46$, $p < 0.001$, $\eta^2 = 0.336$. Post-hoc tests (LSD) gave the following results (cf. Table 3 and Figure 3): French speakers used topic maintenance more than Chinese speakers, low-level learners used it more than the other three groups, intermediate learners did not show a significant difference compared with the two groups of native speakers.

4.2.2 Focus shift

When the topical relatum-entity of the utterance is identical to the theme-entity introduced in focus in the previous utterance, we observe a referential shift from focus to topic with a change of conceptual role: a theme-entity becomes a relatum-entity. Thus, in example (26), the theme-entity (*mǎlù* 马路 ‘road’) introduced in the focus of (26a) shifts to the topic of (26b) as a relatum-entity.

Table 3: Topic maintenance.

	<i>M</i>	<i>SD</i>	95% CI	<i>p</i> value			
				Ch	Fr	Low	Int
Ch	0.364	0.180	[0.270, 0.456]	–	0.014	<0.001	0.087
Fr	0.532	0.202	[0.438, 0.626]		–	0.002	0.435
Low	0.745	0.206	[0.651, 0.839]			–	<0.001
Int	0.479	0.210	[0.385, 0.573]				–

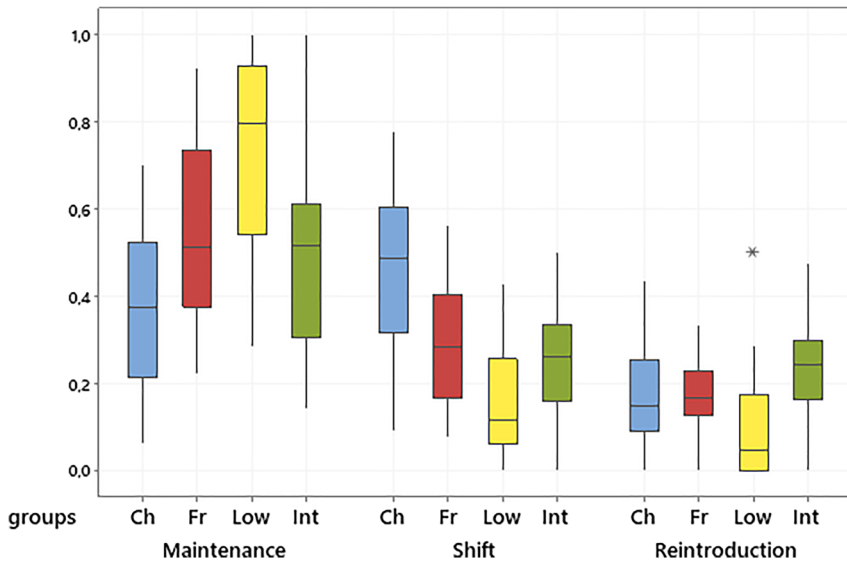


Figure 3: Referential linkage.

- (26) a. 在广场的前面有一条马路。(Ch)
 zài guǎngchǎng de qiánmian yǒu yī-tiáo mǎlù
 at square SUB in.front exist one-CL road
 REL 1 TH 1
- b. 马路上有很多车。
 mǎlù=shang yǒu hěn duō chē
 road=on exist very many car
 TH 1 > REL 2 TH 2
- ‘There is a road in front of the square; there are many cars on the road.’

We performed a one-way ANOVA on this variable which showed a significant difference between the four groups of speakers, $F(3, 68) = 13.71$, $p < 0.001$, $\eta^2 = 0.377$. A post-hoc test (Tukey) gave the following results (cf. Table 4 and Figure 3): Chinese speakers used more focus shifts than the other groups, low-level learners used it less than French speakers, intermediate learners did not show a significant difference when compared with French speakers and low-level learners.

4.2.3 Topic reintroduction

The data included some cases of reintroduction of a topical relatum-entity that was previously mentioned in non-adjacent utterances (where a different topic relatum

Table 4: Focus shift.

	<i>M</i>	<i>SD</i>	95% CI	<i>p</i> value			
				Ch	Fr	Low	Int
Ch	0.460	0.178	[0.391, 0.529]	–	0.005	< 0.001	< 0.001
Fr	0.291	0.145	[0.222, 0.356]		–	0.029	0.885
Low	0.152	0.130	[0.083, 0.221]			–	0.158
Int	0.255	0.128	[0.186, 0.324]				–

intervened) in the discourse. For instance, *guǎngchǎng* 广场 ‘square’ in (27a) is reintroduced in (27e), and *pēnquán* 喷泉 ‘fountain’ in (27c) is reintroduced in (27f) after several utterances and other intervening relatum-entities.

- (27) a. 广场有五个树。 (Int)
guǎngchǎng yǒu wǔ-gè shù
square exist five-CL tree
REL 1 TH 1
- b. 在中间有一个喷泉。
zài zhōngjian yǒu yī-gè pēnquán
at middle exist one-CL fountain
REL 1: topic maintenance TH 2
- c. 喷泉左边有一个报亭。
pēnquán zuǒbian yǒu yī-gè bàotíng
fountain left exist one-CL kiosk
TH 2 > REL 2: focus shift TH 3
- d. 报亭里面有一个老人。
bàotíng lǐmian yǒu yī-gè lǎorén
kiosk inside exist one-CL old.man
TH 3 > REL 3: focus shift TH 4
- e. 广场有十个人。
guǎngchǎng yǒu shí-gè rén
square exist ten-CL person
REL 1: topic reintroduction TH 5
- f. 喷泉的右边是一个车。
pēnquán de yòubian shì yī-gè chē
fountain SUB right be one-CL car
REL 2: topic reintroduction TH 6
- ‘There are five trees at the square; there is a fountain in the middle; there is a kiosk to the left of the fountain; there is an old man in the kiosk; there are ten people at the square; there is a car to the right of the fountain.’

We performed a one-way ANOVA on this variable which showed a significant difference between the four groups of speakers, $F(3, 68) = 4.11, p = 0.010, \eta^2 = 0.153$. A post-hoc test (Tukey) gave the following results (cf. Table 5 and Figure 3): the only significant difference between the groups was between the learners, the intermediate-level group used significantly more reintroduction than the low-level group.

5 Discussion

Previous studies have shown that the construction of discourse in L2 can be affected in different ways depending on the learner’s level of proficiency. We will therefore link the results obtained on referential movement (Section 4.2) to those on the locative topic (Section 4.1), in order to answer our three research questions:

1. Are there differences between the two proficiency levels in the mastery of the linguistic devices used in the locative phrase in Chinese?
2. Are there differences between the two proficiency levels in the organization of information in discourse?
3. If so, what are these differences and what factors can explain them?

5.1 Discourse organization at the beginner level

Topic reintroduction is the least used type of reference maintenance among the four groups. Watorek (1998) showed that the reintroduction of a referent is generally sporadic in the descriptive discourse of native speakers, and depends on the speaker’s individual assessment of the co-text and the type of communicative task elicited. The speakers proceed to a reintroduction when they judge that an important referent is no longer active at a given moment in the construction of the

Table 5: Topic reintroduction.

	<i>M</i>	<i>SD</i>	95% CI	<i>p</i> value			
				Ch	Fr	Low	Int
Ch	0.177	0.126	[0.121, 0.232]	–	1.000	0.253	0.363
Fr	0.177	0.087	[0.122, 0.233]		–	0.243	0.375
Low	0.103	0.138	[0.048, 0.156]			–	0.004
Int	0.241	0.112	[0.186, 0.296]				–

discourse. This type of referent is rare on the poster task (e.g., the square, the street, the buildings), which explains the limited use of topic reintroduction. In learner productions, we observe an increase in the use of this strategy between the two groups. This increase can be explained by a greater ease in the organization of discourse in the L2.

As shown in Section 4.1.1, the beginners' discourse is characterized by a tendency to leave the topic expression implicit. The choice of the 'Vexist + NP' syntactic structure affects conceptual complexity. Omission of the topic component requires the exact same topic information across a series of adjacent utterances. The speaker must select a salient relatum on the poster to be able to anchor a series of entities to this region, which would be expressed by postverbal NPs (cf. example 15). The spatial relations in this case correspond to topological inclusions (inner space). Thus, the topic maintenance from one utterance to the next is the result of the frequent omission of the locative topic in the beginner learners' discourse.

This tendency of omission is similar to what we observed in the discourse of native French speakers. We may consider that the encoding of the locative phrase by an adjunct in French has an impact on the selection of this information in discourse (Arslangul and Watorek 2020), and that this property of the preverbal message in L1 also has an influence on French-speaking learners in their L2 production.

However, we should not consider this result solely in terms of L1 influence. In our study, both the learners' source language and the syntactic structure of the target language allow for this omission. As it is a simple syntactic structure, these beginner learners used it very frequently. But several studies on static spatial descriptions in L2 (by Italian-speaking learners of L2 French, French-speaking learners of L2 Italian, and Polish-speaking learners of L2 French; Hendriks and Watorek 2008; Watorek 1998, 2003) have also shown that all L2 groups showed a tendency to use implicit topic. Therefore, this strategy must be at least partly shared by learners from different language backgrounds.

Studies carried out on this low-level of proficiency within the ESF project (Klein and Perdue 1997; Perdue 1993) clearly showed that the rudimentary and idiosyncratic linguistic devices available to a beginner level learner lead to a compromise between the available devices and the conceptualization of a complex verbal task during discourse production. Perdue (1993) notes that transfer, clearly identifiable as the impact of the learners' L1, appears only later, with the development of the learner variety. This shows clearly in our discussion of the results of the intermediate-level learners, below.

5.2 Discourse organization at the intermediate level

The descriptions produced by intermediate learners are more grammaticalized,⁷ compared to beginner productions. Intermediate learners no longer present any significant difference compared to Chinese speakers in the frequency of explicit locative phrases. They also showed a more diverse range of structures for the locative phrase.

A previous study comparing French and Chinese native speakers (Arslangul and Watorek 2020) provided the following results. The SVO syntactic structure of the Chinese existential construction matches perfectly with the topic-focus order. In contrast, in the French existential construction, the topic component is an adjunct. Thus, although French speakers prefer the topic-focus order by opting for the syntactic structure ‘PP/Adv.P + Vexist + NP’, the syntactic flexibility of French in this context allows native speakers to move away from this order. Since the locative topic is an adjunct, which can be moved or omitted entirely, it is less frequently realized explicitly in preverbal position, and sometimes does not refer to a specific place (delimited by a relatum-entity) but to a wider region of space (signaled with an adverb). Since neither of the two conditions required for focus shift are met, topic maintenance is the most frequent referential movement in the discourse of French native speakers.

In Chinese, since the topic component is also the subject of the utterance, it can only occur in the preverbal position. Moreover, because it must refer to a relatum-entity, it is less likely to be kept constant from one utterance to the next. Thus, the syntactic properties of the Chinese existential construction lead native speakers to organize their discourse around the entities domain rather than around the spatial domain; e.g. *diāosù pángbiān* 雕塑旁边 ‘beside the statue’ is preferred to *pángbiān* 旁边 ‘beside’ only. The focus shift that is frequent in native speaker productions is conditioned by the rigid SVO structure where the relatum-entity is expressed by an explicit preverbal subject. This relatum-entity is maintained from the focus of the last utterance, expressed by the postverbal NP object. Thus, Chinese speakers adopt an entity-based perspective when organizing information for expression in a description, described by Carroll and von Stutterheim (1993, 1997) as *point-by-point*.

The most frequent locative phrase in Chinese speaker descriptions, ‘(P+) N + LOC’, is less used by intermediate learners; furthermore, this learner group

⁷ Grammaticalization is used here in the context of second language acquisition as defined by Giacalone Ramat (1992): the development of syntactic and morphological complexity in the learners’ system which aims to adapt the forms of the interlanguage to those of the native-like target language.

used three locative phrases ('P + N', 'P + LOC' and 'LOC'; cf. examples 20–23) that, although grammatical in Chinese, are rarely used by native speakers.

A similar phenomenon was observed in Carroll and von Stutterheim's (1997) study of English-speaking intermediate learners of L2 German. These learners encoded relata in the descriptions using prepositional phrases; although this linguistic device is grammatical in the target language, it was only rarely chosen by native German speakers, who showed a clear preference for another highly productive syntactic category, the pro-adverbials (composed of the anaphoric adverb *da* 'there' and a prepositional form; e.g., *naben* 'there beside', *davor* 'there in front', *dahinter* 'there behind').

Therefore, in second language acquisition, learners may choose linguistic devices in the target language which are grammatical but not typical of native speaker patterns, and which present certain similarities with the linguistic devices available in the learners' L1. The resultant discourse, while not ungrammatical, is different from that produced by native speakers.

In our intermediate learner data, the 'P + LOC' or 'LOC' type of locative phrases only refer to the space domain, and allow speakers to mimic common locative phrases in French, which are constructed with an intransitive adverb phrase, like *derrière* 'behind' or *au milieu* 'in the middle', without reference to the entities domain. Furthermore, the 'P + N' phrase refers only to the entities domain; therefore it cannot express anything other than a spatial relation of inclusion (relating an entity to the inner space of the relatum). Significantly, since these three types of locative phrases do not meet the conditions necessary for focus shift between utterances, intermediate-level learners cannot produce the same type of referential movement as native Chinese speakers due to the structure of the locative phrase in their utterances.

This suggests that these learner productions are the consequence of two different phenomena: the properties of the locative phrase in their L1 with respect to the entities domain, and the particularities of the linguistic devices used in L2 with respect to the space domain, namely localizers. This is a syntactic category that does not exist in French. Its syntactic postposition following the noun in the phrase also represents a difference vis-à-vis the prepositional system in these learners' L1. Charters (2005: Ch. 9) studied the emergence order of the nominal structures of Mandarin. She identified 18 theoretically distinct and productive nominal surface structures in her learner data (such as simple nominals, quantified nominals, demonstratives...). She established the emergence order of nominal structures in the spontaneous discourse of L2 Chinese for learners of different L1s (English, Korean and Japanese), ranked 1–10. In her results, structures that correspond to '(P+)N + LOC' rank quite high (seventh and tenth respectively). This reveals that localizers represent a difficulty in the acquisition of the NP structure in

L2 Chinese. This result is consistent with our observations. The difficulties learners face in applying such target syntactic categories influence the structure of the locative phrase, which, in turn, affects the organization of information in discourse.

According to Levelt (1989), information selection and packaging in context is determined by perspective-driven processes. In the descriptive discourse, one can adopt an entity-oriented or space-oriented based perspective. Slobin (1987) stated that when the mind has been trained from a very young age to pay different kinds of attention to events when talking about them (*Thinking for speaking*), this training is very resistant to restructuring in the acquisition of a foreign language. We believe that the differences between French and Chinese partly explain the results observed in intermediate learners' productions.

6 Conclusion

We described the expression of spatial localization in French, Chinese, and L2 Chinese on the syntactic, conceptual and discourse levels in a descriptive discourse referred to as a static spatial description.

We showed that there are differences in the mastery of the linguistic devices used in the expression of locative phrases by Chinese L2 learners of two proficiency levels, and that these differences play a role in the way information is organized in their discourse. Among low-level learners, the limited linguistic devices available to them in the target language often lead them to omit the locative topic. Therefore, on the conceptual level, the entities described are located in the broader region of some large relata, producing a less precise description, and on the discourse level, the flow of information is limited to topic maintenance. The inventory of available linguistic devices is more developed for intermediate learners. Although they are able to produce more precise descriptions, the organization of their discourse remains different from that of native Chinese speakers.

Our results confirm those of previous studies (cf. in particular Carroll and von Stutterheim 1993, 1997; Carroll et al. 2000; Hendriks and Watorek 2008) and show an influence of the L1 as well as a restrictive role of the linguistic devices used in L2 on the organization and the conceptualization of the intended message in the poster description.

Carrying out a complex communicative task of this type requires significant workload on the learner's part. After having learned the linguistic devices used in the L2 to locate entities in space, the learner must identify the role played by the conceptual domains of entities and space in selecting the important information to

be encoded in the locative phrase and ultimately, organize the flow of information following the same pattern the native speakers of the target language use.

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Bionotes

Arnaud Arslangul

CRLAO UMR 8563 & Inalco, Département d'Études chinoises; 65, rue des Grands Moulins CS21351 75214, Paris Cedex 13, France
arnaud.arslangul@inalco.fr

Arnaud Arslangul is Associate Professor in the Department of Chinese Studies at the National Institute of Oriental Languages and Civilizations (Paris, France) where he teaches Chinese language and linguistics. He is affiliated to the Center for East Asian Linguistic Research (CRLAO, UMR 8563). His research focuses on the acquisition of L2 Chinese, especially on the expression of motion events and on the reference to space and entities in discourse.

Marzena Watorek

Structures Formelles du Langage UMR 7023 & Université Paris 8 Département Sciences du langage, Paris, France
watorek@univ-paris8.fr

Marzena Watorek is Full Professor at the Université Paris 8 and member of the Laboratoire Structures Formelles du Langage (UMR 7023/CNRS), France. Her research focuses on comparative approaches in SLA, in particular the phenomena of discourse production in first and second language acquisition relative to cross-linguistic influence and age factors, as well as the input processing in the earliest stages of L2 acquisition. She also investigates the interface between language acquisition and teaching.