

Asymmetry in the Acquisition of Directed Motion Constructions in L2 Vietnamese A Comparative Study of Chinese and Korean Learners

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Abstract This paper offers a comparative overview of the expression of directed motion constructions in Vietnamese, Chinese, and Korean, and explores the acquisition of these constructions by L1 Korean and L1 Chinese learners of Vietnamese, with a focus on the role of typological factors and language-specific morpho-syntactic properties in the acquisition process. This investigation not only provides valuable insights into the challenges faced by learners of L2 Vietnamese from diverse linguistic backgrounds but also enriches our understanding of the typology of motion events.

Keywords Directed motion constructions. L2 Vietnamese. Chinese. Korean. Second language acquisition. Language typology.

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1 Introduction

This study aims to provide a comparative overview of the expression of directed motion constructions in Vietnamese, Chinese, and Korean, and to explore the acquisition of these constructions by L1 Korean learners and L1 Chinese learners of Vietnamese, focusing on the role of typological factors and language-specific morpho-syntactic properties in the acquisition process.

Talmy, adopting a cognitive linguistics perspective, divides languages into ‘verb-framed’ and ‘satellite-framed’, based on the characteristic pattern in which the conceptual structure of the macro-event is mapped onto the syntactic structure. He defines a ‘satellite to the verb’ as “the grammatical category of any constituent other than a nominal or prepositional-phrase complement that is in a sister relation to the verb root” (Talmy 2000, 222), which can be either a bound affix or a free word: e.g. English verb particles, Russian verb prefixes, and Chinese verb complements.

According to Talmy (2000, 222), languages that characteristically map the core schema (the portion of the framing event which determines its character and distinguishes it from other framing events, i.e. the main event; 218) onto the verb have a framing verb and are defined as verb-framed languages (e.g. Romance languages and Japanese). In contrast, languages that map the core schema onto the satellite have a framing satellite and are defined as satellite-framed languages (e.g. English and Chinese). Languages with a framing satellite map the co-event onto the main verb (co-event verb). However, it has been pointed out that there are languages which do not fit this classification. Based on motion events, Slobin (2004; 2006) identifies a third group of languages, i.e. ‘equipollently-framed languages’, in which both Manner and Path are expressed by a verb, to which serialising languages (i.e. those with serial verb constructions) belong (see also Zlatev, Yangklang 2004; Ameka, Essegbey 2013; van Putten 2017). Croft et al. (2010) point out that many languages use symmetric strategies, by which the semantic components of the event are expressed by forms that may occur as predicates on their own: besides serial verbal constructions, symmetrical constructions can also be realised through compounding and coordination.

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However, language types are far from homogeneous. It has been pointed out that there is considerable variation even between languages that belong to the same language type (Slobin 2004). For example, both English and Russian are classified as satellite-framed/Manner languages, but Russian speakers choose Manner verbs more frequently than English speakers. Slobin argues that differences in the degree to which Manner and Path are used in the expression of motion events also depend on language-specific morpho-syntactic properties, as well as psycholinguistic and pragmatic factors. In addition, there is considerable variation also in how motion is encoded within a language: in fact, a language may display patterns of different language types (verb-framed, satellite framed, and even equipollently-framed). According to Beavers, Levin and Tham (2010), the linguistic variation observed depends on the lexical (e.g. manner and result verb roots, spatial adpositions and particles), morphological (e.g. case markers, applicative affixes, compounding), and syntactic options (adjunction, verb serialisation, subordination) available in a given language, reflecting its basic typological profile. Based on the possible combinations, language may fall into many crosscutting types. Croft et al. (2010) argue that classification into types should be based on individual constructions rather than a holistic assessment of the entire language.

Within this typology, Chinese and Vietnamese are generally classified as satellite-framed or equipollently-framed languages,¹ while Korean as a verb-framed language.² While previous research has separately examined motion events structures in these three languages, in this paper we will adopt a comparative perspective, in order to have a clear picture of the possible factors influencing the acquisition of Vietnamese directed motion structures by L1 Korean and L1 Chinese learners.

In the past decade, there has been a notable increase in the teaching and learning of Vietnamese as a second language. However, a significant knowledge gap persists regarding how learners navigate the intricacies of Vietnamese, particularly in the realm of word order acquisition. By investigating the typological factors and language-specific features influencing the acquisition process of directed motion constructions in L2 Vietnamese, we intend to shed light on the complexities of language variation and acquisition. This comparative exploration not only offers valuable insights into the challenges faced by learners of L2 Vietnamese from diverse linguistic backgrounds but also enriches our understanding of the typology of motion events.

1 For Chinese, see, among many others, Talmy 2000; 2009; Peyraube 2006; Lamarre 2008; Chen, Guo 2010. For Vietnamese, see Brown 1999; Nguyen L. 2001; Nguyen P.H. 2019; Ly 2019.

2 Choi, Bowerman 1991; Choi 2006; 2009; 2018; among others.

This paper is organised as follows: in Section 2, we will offer a comprehensive overview of the main properties of directed motion constructions in Vietnamese, Chinese, and Korean. In Section 3, we will first formulate the research questions, outline the research design, and articulate the predictions substantiated through cross-linguistic comparison. Then, we will delve into the specifics of data collection, elucidating the questionnaire's structure and detailing information about the participants. Finally, we will present the main findings of the study. Lastly, in Section 4, we will present concluding remarks and discuss several pedagogical implications arising from the study.

2 Directed Motion in Vietnamese, Chinese, and Korean

Expanding upon Talmy's seminal work (1985; 2000), directed motion, which involves a participant that moves with regard to a reference point, following a path, has served as a pivotal criterion for categorising languages into verb-framed and satellite-framed languages. Talmy delineates four essential components of directed motion events: Figure, Ground, Motion, and Path.³ In verb-framed languages, like Japanese, Spanish, and Turkish, the Path element (core schema; see § 1) is mapped onto the verb, as exemplified by the Spanish sentence (1a).⁴ In this sentence, the Path element is encoded in the verb (*entró*), which expresses the motion event. Conversely, in satellite-framed languages, like English and Finno-Ugric languages, the Path element is encoded in a satellite of the verb, showcased in the English sentence (1b). In this instance, the Path element is represented by the preposition 'into', contained within a separate phrase. In addition to these components, a motion event can be associated with an external co-event, usually expressing Manner or Cause (Talmy 2000, 26), which specifies how the motion takes place or how it is caused. Manner or Cause, if present, can be expressed by the main verb (1b) or by an independent constituent (adjunct), as in (1a). Verb-framed languages often tend to omit the Manner.

3 According to Talmy (2000, 25), the basic motion event "consists of one object (the Figure) moving or located with respect to another object (the reference object or Ground)". The Path is defined as "the path followed or site occupied by the Figure object with respect to the Ground object", while Motion "refers to the presence per se of motion or locatedness in the event" (25).

4 The glosses follow the general guidelines of the Leipzig Glossing Rules. Additional abbreviations include: CONN = connective marker, CRS = current relevant state. For the romanisation of Chinese, we use *Hanyu pinyin*; for Korean, we adopt the Revised Romanisation of Korean.

- (1) a. Spanish
*La botella*_{Figure} **entró**_{Motion+Path} *a la cueva*_{Ground} *flotando*_{Manner}
the bottle entered at the cave floating
'The bottle floated into the cave'.
b. English
*The bottle*_{Figure} *floated*_{Motion+Manner} **into**_{Path} *the cave*_{Ground}

This distinction underscores the disparity between verb-framed languages, where the Path element is embedded within the verb itself, and satellite-framed languages, where it appears as a discrete element, apart from the verb; it can be any element other than verb roots, including prepositions (Croft et al. 2010).⁵ This fundamental contrast forms the basis for understanding the diverse grammatical patterns in which languages structure directed motion, providing a foundational framework for our comparative analysis. However, as we mentioned in the introduction, there are languages that apparently do not fit this classification, as for example serial verb languages (including most East Asian and Southeast Asian languages, but also some African and Amerindian languages), where both Manner and Path are expressed by equal grammatical forms, with the same force and significance (see also Peyraube 2006).

2.1 Directed Motion in Chinese

One of the languages that has sparked debates about its place in Talmy's typology is Chinese: while some scholars classify it as a satellite-framed language, others believe that it is an equipollently-framed language.⁶ Yet other scholars consider Chinese to be a verb-framed language (Tai 2003; Tai, Su 2013). Consider the sentence in (2):

⁵ Here, following Croft et al. (2010), we adopt a broader definition of satellites. As a matter of fact, while Talmy's (2000, 222) definition excludes prepositions as satellites, Croft et al. (2010) adopt a different view: a morpho-syntactic element is considered as a 'verb root' if it can occur as a predicate on its own with the same meaning, while anything that encodes an event component other than a verb root is analysed as a satellite. According to this definition, English prepositions that encode the framing/result subevent count as satellites, even if they do not occur without an accompanying ground expression (Croft et al. 2010, 206). Beavers (2008, 285, fn. 3) holds a similar view, pointing out that the morphosyntactic criteria Talmy proposes do not clearly set apart satellites from prepositional phrases; in addition, he highlights that prepositional phrases serve the same function as satellites in motion constructions.

⁶ See Talmy 1985; 1991; 2000; 2009; Li 1997; Shen 2003; Peyraube 2006; Lamarre 2007; 2008; 2013; Ma 2008; Chen, Guo 2010; Shi 2011; 2012; 2014; 2015; 2019; Liu 2014; Yang 2014; Lin 2019; Paul 2022; Lamarre et al. 2022; Guo, Yang, Deng 2022; Chen 2023; a.o.

- (2) 瓶子_{Figure} 漂_{Manner} 进_{Path} 山洞里_{Ground}
píngzi piāo jìn shāndòng-lǐ
bottle float enter cave-in
'The bottle floated into the cave'.

The sentence in (2) is an instance of a directional construction, where V_1 is a verb of motion indicating Manner, while V_2 is a verb of movement indicating direction (Path). V_1 in this construction can be either a motion verb or a transitive verb implying a change of location of its direct object (e.g. *ná* 拿 'take', *rěng* 扔 'throw', *tuī* 推 'push', etc.), while V_2 belongs to a closed class: *shàng* 上 'go up, ascend', *xià* 下 'go down, descend', *jìn* 进 'enter', *chū* 出 'exit', *huí* 回 'return', *guò* 过 'pass, cross, go through', *qǐ* 起 'rise'.⁷

In addition to this kind of construction, there are directional constructions which make use of the deictic directional verbs *lái* 来 'come' and *qù* 去 'go', indicating motion toward the deictic centre and motion away from the deictic centre respectively (for an overview of the structure, properties, and restrictions of directional constructions, see Lamarre 2008; Lin 2019). These constructions can be simple or complex. Simple directional constructions include a V_1 of movement indicating direction, a manner of motion verb, or a transitive verb implying a change of location of its direct object, followed by the deictic 'come' or 'go' (Peyraube 2006; Chen 2023), as e.g. *zǒu-qù* 走去 'walk-go, walk away', *jìn-lái* 进来 'enter-come, come in'. Complex directional constructions include a V_1 , which is a verb of manner of motion or a transitive verb implying change of location of its direct object, and a V_2 of movement indicating direction, followed by *lái* 来 'come' or *qù* 去 'go' (V_3), as e.g. *pǎo-jìn-qù* 跑进去 'run-enter-go, run in (away from the deictic centre)', *ná-huí-lái* 拿回来 'take-return-come, bring back' (toward the deictic centre).⁸ In these verbs, we can observe different parts of the

⁷ Peyraube (2006) calls these constructions as "motion resultative constructions", as, according to him, they are not proper directional constructions, since they do not involve a directional verb (*lái* 来 'come' or *qù* 去 'go').

⁸ Chinese directional constructions are often regarded as serial verb constructions or as verbal compounds (a subtype of resultative compounds; see e.g. Li, Thompson 1981). However, these constructions are structurally looser than other types of verbal compounds and, thus, are not typical lexical units (Lin 2019). In fact, the constituents of directional constructions are separable. Nevertheless, we may remark that the constituents in simple directional constructions without the deictic, like the one in (2), display a higher degree of cohesion than other directional constructions. Beavers, Levin and Tham (2010) point out that it is unclear on the surface whether they are serial verb constructions or VV compounds. In the latter case, the construction can be regarded as an instance of symmetrical construction involving compounding (Croft et al. 2010). However, if one of the constituents can be considered as the head, and thus there is a relation of subordination, they could be seen as an instance of verb-framed or satellite-framed constructions (see Levin, Beavers, Tham 2010).

Path element expressed by different constituents (see Lamarre 2008). In fact, according to Talmy (2000; 2009), the Path component can be subdivided into three parts: 1) the Vector, comprising “the basic types of arrival, traversal, and departure that a Figural schema can execute with respect to a Ground schema” (Talmy 2000, 53; 2009);⁹ 2) the Conformation, comprising the main geometric schema of a Path;¹⁰ 3) Deixis (motion toward or away from the speaker). All the components of the Path may be expressed in the verb or a satellite in a language, but it may also be the case that just one or two parts are expressed in the verb or satellite, while the remainder is expressed in a separate constituent (Talmy 2009).

Therefore, in directional constructions without deictics, like *piāo-jìn* 漂进 ‘float-enter, float into’ (2), V_1 expresses manner and V_2 expresses the Vector+Conformation components of Path, while the Deixis component is lacking. In simple directional constructions with deictics, V_1 may express manner and V_2 the Deixis component of Path, as in *zǒu-qù* 走去 ‘walk-go, walk away’, or V_1 may express Vector+Conformation Path and V_2 may express Deixis, as in *jìn-lái* 进来 ‘enter-come, come in’. Finally, in Chinese complex directional constructions, like *pǎo-jìn-qù* 跑进去 ‘run-enter-go, run in (away from the deictic centre)’, V_1 expresses either Manner or Cause (co-event component), while V_2 (path verb) expresses the Vector+Conformation components, and V_3 (deictic verb) expresses the Deixis component (Talmy 2009; for an in-depth discussion of Path distribution in Chinese, see Lamarre 2008). Other languages with serial verb constructions also distribute the Path component of a motion event across different elements, distinguishing deictic and non-deictic Paths (see Beavers, Levin, Tham 2010).

The question is whether these constructions should be seen as instances of satellite-framed constructions or rather as equipollently-framed constructions. For example, if the path *jìn* 进 ‘enter, into’ in (2) is seen as a complement to the verb *piāo* 漂 ‘float’, then the sentence is a satellite-framed construction; conversely, if *jìn* 进 ‘enter, into’ is regarded to have the same status as the verb *piāo* 漂 ‘float’, the sentence should be regarded as an equipollently-framed construction. Croft et

⁹ These Vectors are part of a small set of Motion-aspect formulas that are quite possibly universal (Vectors are the deep prepositions given in bold): BE_{LOC} **AT**, MOVE **TO**, MOVE **FROM**, MOVE **VIA**, MOVE **ALONG**, MOVE **TOWARD**, MOVE **AWAY-FROM**, MOVE **ALENGTH**, MOVE **FROM-TO**, MOVE **ALONG-TO**, MOVE **FROM-ALONG** (Talmy 2000, 53-4).

¹⁰ According to Talmy (2000, 54), “[t]he Conformation component of the Path is a geometric complex that relates the fundamental Ground schema within a Motion-aspect formula to the schema for a full Ground object. Each language lexicalizes its own set of such geometric complexes”. The relevant Conformations for visual paths are found in the geometry of enclosures, lines, and planes, i.e. the configurations that are involved in boundary-crossing: e.g. ‘in’, ‘on’, ‘into’, ‘onto’, ‘out of’, ‘off’ (Slobin 2009; 2011).

al. (2010) observe that, if a verb in a serial verb construction becomes specialised in meaning and syntactic distribution, it can be described as a satellite. Talmy (2009) argues that even in languages in which the constituents of a motion construction apparently share equal status, as in serialising languages, it is often possible to identify a main verb based on morphological, syntactic, phonological, and semantic factors, as well as co-occurrence patterns and class size; thus, the subordinate verb acts as a satellite. Concerning Chinese, Talmy (2009) concludes that the only directional construction that can possibly be classified as equipollently-framed is the one exemplified by (2).

According to Peyraube (2006) and Yang (2014), the constituents of directional constructions do not have the same status. Peyraube (2006) argues that the second constituent in simple directional constructions, or the second and third constituents (directional complements) in complex directional constructions should be considered as satellites. One of the main reasons for considering directional constituents as satellites is that, even though in modern Chinese these items are still used as main verbs, with their full lexical meaning, when they act as complements in directional constructions, they only indicate direction (e.g. *jìn* 进 'enter' > 'into', *xià* 下 'go down, descend' > 'down') or motion toward or away from the deictic centre (the deictics *lái* 来 'come' and *qù* 去 'go'). Therefore, since Chinese path and deictic verbs in directional constructions are fixed and their meanings partially depart from their original ones, they can be considered as satellites (see Croft et al. 2010). In addition, Peyraube points out that directional complements form one lexical unit with the preceding verb because the whole directional construction expresses a single action.

According to Peyraube, in these constructions, $V_2(V_3)$ s are no longer fully lexical words, with their original meaning, but they have rather become function words or grammatical elements, as a result of a grammaticalisation process. In fact, Peyraube argues that Chinese has undergone a shift from a verb-framed language to a satellite-framed language.¹¹ Other scholars have argued that V_2 or V_2-V_3 in directional constructions have grammaticalised. For example, Lamarre (2008, 72) argues that, when a path verb acts as a Path satellite in directional constructions, it becomes toneless; in the case of simple directional constructions formed by a path verb and a deictic, the deictic loses its tone. Shi and Wu (2014) also point out that the V_2 s in directional constructions usually undergo tone neutralisation, giving rise to a heavy-light prosodic pattern, suggesting that V_1 is the head. In addition, Shi and Wu highlight that most of the V_2 s in directional

¹¹ See also Li 1997; Shi, Li 2001; Wang 2005; Liang 2006; 2007; Liang, Wu, Bei 2008; Hu 2012; Yang 2014; Shi, Wu 2014; Shi 2019.

constructions developed new functions, such as encoding result (see Talmy 2000; 2009). Both tone reduction and semantic change suggest that these verbs have grammaticalised.

In addition, Shi and Wu (2014) point out that the V_2 s in directional constructions form a closed class and that the types of V_2 s that can appear in these constructions have decreased diachronically. This is a further piece of evidence supporting the satellite status of these items (see Talmy 2009).

Furthermore, Shi and Wu (2014) observe that, in these constructions, V_2 s accompanying the main verb can be placed under the scope of negation. In addition, V-not-V alternative questions can be realised on the main verb (V_1 *méi* 没 V_1 - V_2) or on the whole construction (V_1 - V_2 *méi* 没 V_1 - V_2), but not on V_2 (V_1 - V_2 *méi* 没 V_2). Shi and Wu point out that this asymmetry indicates that the perfective aspect marker *le* 了 can be used with V_1 and with the whole construction, but not with V_2 . Therefore, Shi and Wu (2014) conclude that, from the morpho-syntactic point of view, V_2 s in directional constructions can be treated as complements to the main verb, even though some of them can still act as main verbs in other contexts. This qualifies these items as satellites (see Croft et al. 2010; fn. 5 above). Other studies also provide arguments in favour of the complement/satellite status of the V_2 s in directional constructions and describe their diachronic development.¹² Since it is beyond the scope of this paper to provide an in-depth theoretical discussion on the status of Chinese directional complements, we will not delve into the issue further, and we refer the reader to the relevant literature.

In Chinese we can also find instances of verb-framed constructions, including those involving the deictic verbs *lái* 来 ‘come’ and *qù* 去 ‘go’ (3e), where the verb itself encodes Motion and Path:

- | | | | | | |
|-----|----|-------------------------------|-------------------|----------------------|-----------|
| (3) | a. | 他们 _{Figure} | 进 _{Path} | 教室 _{Ground} | 了。 |
| | | <i>tāmen</i> | <i>jìn</i> | <i>jiàoshi</i> | <i>le</i> |
| | | they | enter | classroom | CRS |
| | | ‘They entered the classroom’. | | | |
| | b. | 她 _{Figure} | 上 _{Path} | 车 _{Ground} | 了。 |
| | | <i>tā</i> | <i>shàng</i> | <i>chē</i> | <i>le</i> |
| | | she | go.up | vehicle | CRS |
| | | ‘She got on the car/bus’. | | | |
| | c. | 她 _{Figure} | 回 _{Path} | 家 _{Ground} | 了。 |
| | | <i>tā</i> | <i>huí</i> | <i>jiā</i> | <i>le</i> |
| | | she | return | home | CRS |
| | | ‘She went back home’. | | | |

¹² See e.g. Shi 2011; 2012; 2014; 2015; 2019; Shi, Wu 2014; Shu, Yang, Su 2018.

| | | | | |
|----|--------------------------------|------------------------------------|--|-----------------|
| d. | 我 _{Figure} wǒ I | 到 _{Path} dào arrive | 北京 _{Ground} Bēijīng Beijing | 了。 le CRS |
| | ‘I arrived to Beijing’. | | | |
| e. | 我 _{Figure} wǒ I | 去 _{Deictic} qù go | 北京 _{Ground} Bēijīng Beijing | 了。 le CRS |
| | ‘I went to Beijing’. | | | |

These constructions are found only in the expression of spontaneous motion events but not in caused motion events (Lamarre 2008).

Lamarre (2008) points out that Chinese path verbs are often combined with a deictic verb, splitting the Path component into two constituents (Path+Deictic), as in (4):

| | | | | | |
|-----|--|-----------------------------------|--|----------------------------------|----------------|
| (4) | 他们 _{Figure} tāmen they | 进 _{Path} jìn enter | 教室 _{Ground} jiàoshì classroom | 去 _{Deictic} qù go | 了 le CRS |
| | ‘They entered the classroom’. (away from the deictic centre) | | | | |

According to Lamarre, there is a strong tendency for path verbs to be bimorphemic (Path+Deictic), especially when no locative NP follows.

Actually, some scholars argue that Chinese is a mixed type language, displaying features of satellite-framed, equipollently-framed, and verb-framed languages (see Beaver, Levin, Tham 2010; Ji, Hohenstein 2017; Liao et al. 2020). Lamarre (2008) considers Chinese to be a ‘split’ type language, basically because it allows verb-framed language type encoding only for spontaneous motion events.

2.2 Directed Motion in Vietnamese

The ambiguity in linguistic categorisation described for Chinese above can also be observed in Vietnamese, another language with serial verb constructions. The intricate nature of Vietnamese within Talmy’s event typology is highlighted in studies conducted by Beecher (2004), Pace (2009), and Ly (2019). These studies present a dual classification for Vietnamese, categorising it as both satellite-framed and equipollently-framed, according to Slobin’s framework (1996; 2004; 2006). Consider the Vietnamese example below:

- (5) *Cái chai*_{Figure} *trôi*_{Manner} *vào*_{Path} *trong* *hang*_{Ground}
CLF bottle float enter in cave
'The bottle floated into the cave'.

In this sentence, the motion event is expressed in the same way as in the Chinese sentence in (2). In this case, *vào* can be interpreted either as a preposition meaning 'into' or as a verb meaning 'enter', with the same status as the verb *trôi* 'float', forming a serial verb construction (on the debate on the status of 'words denoting direction' as *vào*, see Nguyen P.H. 2019). In the first case, it is an instance of a satellite-framed construction, while in the second case it aligns with the equipollently-framed category, since Manner and Path are expressed in equivalent categories. However, even if *vào* is considered as a verb, if it is possible to identify a main verb based on specific criteria, then the two verbs do not have exactly the same status, and the subordinate verb can be construed as a satellite to the main (head) verb (Talmy 2009).

Different scholars have investigated motion constructions, shedding light on the grammaticalisation of motion elements and the role of directional components in Vietnamese. For instance, Brown (1999) and P.H. Nguyen (2019) examined the evolution of motion elements from verbs to prepositions. L. Nguyen (2001) extended the exploration to three dimensions: space, time, and mental psychology of speech participants. Recent studies, such as those by Ly (2019), have examined Vietnamese's position in the typological framework of motion event encoding, drawing from approaches by Talmy (1985; 2000) and Slobin (1996; 2004; 2006). These researchers collectively emphasise Vietnamese's remarkable flexibility within Talmy's and Slobin's typology. This debate foregrounds the linguistic flexibility of Vietnamese, as its categorisation hinges on specific syntactic structures and interpretations.

Almost all languages have path verbs, and Vietnamese is no exception, thus it also displays verb-framed constructions. P.H. Nguyen (2019) points out that, while Vietnamese has a great amount of manner verbs, it only has a few path verbs: *ra* 'exit', *vào* 'enter', *lên* 'ascend', *xuống* 'descend', *sang* 'across', *qua* 'across', *về* 'return', *đến* 'arrive', *tới* 'arrive', *lại* 'arrive/return', *đi* 'go' (Nguyen P.H. 2019; Nguyen L. 1990, 125-48, cit. in Nguyen P.H. 2019). See the examples in (6):

- (6) a. *Hoa*_{Figure} *lên*_{Deictic} *lầu*_{Ground}
Hoa go.up floor
'Hoa goes/went upstairs'.

- b. Hoa_{Figure} $đi_{Deictic}$ $chợ_{Ground}$
 Hoa go market
 ‘Hoa goes/went to the market’.
- c. Hoa_{Figure} $đi_{Deictic}$ $vào_{Path}$ (trong) $chợ_{Ground}$
 Hoa go enter in market
 ‘Hoa goes/went into the market’.

As shown in (6c), the deictic verb *đi* ‘go’ combines with a path verb, thus the sentence encodes both Path and Deixis. Note that, differently from Chinese, the deictic *đi* ‘go’ is the first element of the construction. In addition, in (6c), Manner cannot be expressed by adding a manner verb. In order to specify Manner, the verb *đi* ‘go’ must be replaced by a manner verb, as e.g. *bước vào* ‘walk enter’. Therefore, apparently, differently from Chinese, when both Manner and Path are expressed, it is not possible to split the Path into two components (path verb+deictic verb).

2.3 Directed Motion in Korean

Differently from Chinese and Vietnamese, Korean is generally classified as a verb-framed language,¹³ since, as in Spanish (1a), it can occupy the main verb slot with a path verb, either a Conformation verb or a deictic verb (Talmy 2000, 56-7). However, differently from Spanish, both Path components may appear concurrently. In fact, a deictic typically follows the other Path constituent in sentences with intransitive verbs expressing spontaneous displacement of the agent, which moves by itself or without explicit causes,¹⁴ similar to the case of the Chinese example in (4). See the example (7), adapted from Choi (2018, 107):

- (7) John_{Figure} 방에_{Ground} 들어_{Path} 갔다_{Deictic}
John-i *bang-e* *deur-eo* *ga-t-da*
 John-SUBJ room-in enter-CONN go-PST-DECL
 ‘John went into the room’. (away from the speaker)

The verb in (7) is a complex verb formed by *deur-* ‘enter’ (path verb) followed by *gatda* ‘went’ (deictic), which encodes Motion (Choi, Lan-tolf 2008): it indicates the direction of the motion with respect to

¹³ Choi, Bowerman 1991; Talmy 2000; Choi 2006; 2009.

¹⁴ Choi, Bowerman 1991; Talmy 2000; Choi 2011; 2018.

the speaker (Choi, Bowerman 1991; Choi 2011; 2018). The two verbs are conjoined by the connective *-eo* 어, whose function is simply to connect a verb stem to the next one (Choi 2011); only the rightmost constituent bears tense. Different from a Verb-framed language like Spanish, then, Korean encodes Motion in the deictic verb (Choi, Lantolf 2008).

Choi (2018) considers this an instance of a serial verb construction, which is a typical construction in Korean, where the verbs share the same tense (attached to the rightmost verb) and the same subject. However, the analysis of this construction is subject of debate, and it has been variously considered as a compound, a serial verb construction, or a complex predicate (see Beavers, Levin, Tham 2010).

This construction can contain more than two verbs and specify Manner too. Compare the example (7) with (8) (adapted from Choi, Bowerman 1991, 88):¹⁵

- (8) John_{Figure} 방_{Ground} 뛰_{Manner} 들어_{Path} 갔_{Deictic}
John-i bang-e ttwi-eo deur-eo ga-t-da
John-SUBJ room-in run-CONN enter-CONN go-PST-DECL
'John run into the room (away from the speaker) / John went into the room running'.

This construction recalls Chinese complex directional constructions (§ 2.1), where the Manner and the Path components are expressed by means of different verbal roots. However, in Korean, verbs are linked by a connective particle. Note that it is also possible in Korean to use the manner verb with the deictic verb alone (e.g. *ttwi-* 'run', *ga-* 'go'), similar to Chinese simple directional constructions, as e.g. *pǎo-qù* 跑去 'run-go' (§ 2.1).

Constructions like those in (8), where both Manner and Path are expressed by verbs in a serial verb construction, should be considered as equipollently-framed, and actually Choi (2011, 159) argues that, syntactically, the verbs in this construction are considered to have an equal status. However, the classification of this construction depends on whether it is possible to single out a main verb or whether

¹⁵ Choi argues that there are no restrictions on how many verbs can be put together in this construction, as in the example below, adapted from Choi (2011, 160):

- (i) 돌_i 산_{에서} 굴러 떨어_져 내려_{왔다}
dor-i san-eseo gull-eo tteoreoj-yeo naery-e-wa-t-da
stone-SUBJ mountain-from roll-CONN fall-CONN descend-CONN-come-PST-DECL
'A stone rolled down, falling and descending'.

According to Choi (2011), in (i) there is a Manner verb (*gull-* 'roll') followed by three Path verbs (*tteoreoj-* 'fall', *naery-* 'descend', and *wa-* 'come').

all verbs have exactly the same status, similar to the case of Chinese or Vietnamese considered above. Choi and Bowerman (1991, 88) argue that, in expressions of spontaneous motion, the main verb is usually 'go' or 'come', the rightmost verb (see also Choi 2009), in which Motion is conflated with Deixis; the fact that John changed his location in (7) and (8) is specified by the verb 'go', which is a required element in this construction (see also Choi, Lantolf 2008). This verb is preceded by a path verb, which may also be preceded by a manner verb. Interestingly, while for spontaneous motion, the path verb is typically followed by a deictic verb (cf. Chinese), as in the examples (7) and (8), for caused motion, the deictic is not used; a transitive or causative path verb alone is sufficient (Choi 2009; 2011).

Choi and Lantolf (2008, 195) point out that, if the motion is not salient, Korean speakers tend to omit the Manner, resulting in constructions like (7), where only the two Path components are expressed. This aligns with verb-framed languages, which tend to express Manner less frequently than satellite-framed languages. In addition, Choi (2009) points out that Korean is more Path-oriented than Spanish, because Korean speakers tend to express Path of motion more frequently than Spanish speakers do. Similarly, Özçalışkan and Slobin (1999) found that Turkish, an agglutinating and SOV language like Korean, is more Path-oriented than Spanish.

2.4 Directed Motion in Chinese, Vietnamese, and Korean: A Comparison

The distinctive patterns illustrating the differences in how Vietnamese, Chinese, and Korean structure motion events can be summarised as follows, considering two key parameters of variation:

- a. Vietnamese is a satellite/equipollently-framed language, where Manner and Path are expressed by means of different verbal roots, and Path is placed between Figure and Ground.
- b. Chinese is a satellite/equipollently-framed language, where Manner and Path are expressed by means of different verbal roots, and Path is generally placed between Figure and Ground.
- c. Korean is a verb-framed language, and Path is placed after Figure and Ground.

Based on these two parameters, Chinese and Vietnamese are similar, while Korean is typologically distant. However, this picture is too simplistic, and the complexity of the three languages described above highlights the importance of taking into account different constructions and specific lexical and morpho-syntactic devices available in each language. The first important factor to note is that all three languages in question allow serial verb constructions, which

makes it possible to express Manner as a verb (see Beaver, Levin, Tham 2010). Therefore, also in Korean both Manner and Path may be expressed by different verbs forming a serial verb construction (7), similar to multiverb constructions found in Chinese and Vietnamese. In addition, languages with serial verb constructions may also distinguish deictic and non-deictic components of Path, allowing them both to be expressed in the description of a motion event. This aligns Chinese and Korean patterns together, making them distant from Vietnamese. In fact, both in Chinese and in Korean spontaneous motion events, the Path slot can be filled concurrently by a path verb and a deictic verb, with the latter serving as the final element of the construction, as in (4) and (7) above.¹⁶ This differs from Vietnamese, where the deictic comes first, as in example (6c). In addition, differently from Vietnamese (see the discussion on ex. 6, § 2.2), in Chinese and Korean, both Path components may be expressed also when a manner verb is present (§ 2.1, § 2.2, ex. 8).

Furthermore, when dissecting motion events into four components (Path, Motion, Figure, and Ground, following Talmy's framework), a significant variation parameter emerges. In Vietnamese, which has an SVO (Subject-Verb-Object) basic syntactic word order (see Phan, Duffield 2022), directed motion constructions are typically arranged as Figure (the moving object), Path (the direction of motion), and then Ground (reference object), as exemplified in (5). Similarly, Chinese, which is generally regarded as an SVO language (see Sybesma 2017), in directed motion constructions display the sequence Figure>Path>Ground, as illustrated in (2). However, if a deictic path verb is present, it must be placed after the Ground. Conversely, Korean, an SOV language, in directed motion constructions follows the pattern Figure>Ground>Path, in which the Path element is the last element, as shown in (7) and (8). It is worth noting that Chinese is similar to Vietnamese in this respect, while Korean exhibits a distinct structure.

Another feature to consider in the expression of motion events is the use of language-specific devices to denote location or the starting/endpoint of a motion event. In fact, the Ground phrase can assume different forms in different languages. In Korean, there are postpositional markers that attach to the Ground nominal (Choi 2011; 2018), as e.g. those shown in examples (7)-(8) and fn. 15 (i). When the Ground is expressed as a direct object of the verb, it carries a direct object marker (Choi 2009). According to Choi (2009), in verb-framed languages, including Korean, Paths that refer to the goal or source

16 However, differently from Chinese, the deictic cannot be omitted in Korean. Also note that, while in Chinese deictic verbs can also be used in caused motion events, in Korean they are generally not used.

of motion ('endpoint paths') occur within an intransitive frame, as in (7) and (8), while those that refer to the space traversed by the figure ('trajectory paths') occur within a transitive frame, as in the example (14c) below. This would contrast with satellite-framed languages, where both types of Paths generally appear within an intransitive frame. According to Choi, this difference lies in the fact that in verb-framed languages the Path is mapped onto the main verb, which makes it possible to assign different syntactic and semantic roles to the Ground nominal. In contrast, since in satellite-framed languages the Path is generally expressed by a satellite, the Ground element is generally not constructed as a direct object, but rather it is placed within a prepositional phrase (Choi 2009, 182-3).

In Chinese, the Ground can be an unmarked noun, as in (3) and (4), or a noun followed by a so-called localiser, as *-lǐ* 里 'in', like in the sentence in (2).¹⁷ In addition, prepositions can mark source (e.g. *cóng* 从 'from') or direction (e.g. *xiàng* 向 'toward'); these prepositional phrases precede the verb in Chinese and are an exception to the Figure>Path>Ground order, since the Ground precedes the Path in this case: e.g. *tā xiàng wǒ zǒu-lái* 他向我走来 '3SG toward 1SG walk-come, walk toward me'. Endpoint, instead, can be introduced by post-verbal items, as e.g. *dào* 到 'arrive, up to' and *zài* 在 'stay, at', whose status is ambiguous between verbs and prepositions (Lin, Sun 2016 consider them as goal prepositions): e.g. in *pǎo-dào shāngdiàn* 跑到商店 'run-to shop, run to the shop', the post-verbal prepositional phrase follows the manner verb *pǎo* 跑 'run' and indicates Goal.¹⁸ This is a satellite-framed construction, since the Goal is expressed by a prepositional phrase; the Path is expressed in the satellite (see Beavers, Levin, Tham 2010). Again, specific constructions depend on the particular devices available in a language, allowing for variation within the language itself. It is worth noting that in Chinese the Ground can be constructed as a direct object, both in the case of 'endpoint' Paths (as in 3 and 4 above, where the main verb is a path verb) and in the case of 'trajectory' paths (e.g. *zǒu shàng lóutī* 走上楼梯 'walk up stair, walk up the stairs').

¹⁷ Localisers, treated as postpositions, clitics, or nouns in the literature, specify spatial relationships between entities (Lin, Sun 2016, 395): e.g. *zhuōzi-shàng* 桌子上 'table-on, on the table'.

¹⁸ *Dào* 到 is not a Goal marker per se, since it is used to introduce different types of boundaries, as temporal and degree boundaries (e.g. *xué-dào bàn yè* 学到半夜 'study-to midnight, study until midnight', *jiǎ rè-dào yī bǎi dù* 加热到100度 'heat-to one hundred degree, heat to 100 degrees'). It can be considered as an *until*-marker, which, as in other languages, is not a dedicated Goal marker but expresses general delimitation: "[t]he precise form of delimitation is inferred from the nature of the event and the complement of the *until*-marker" (Beavers, Levin, Tham 2010).

In Vietnamese, the Ground nominal can be a bare noun, as in the examples in (6), but location and starting/endpoint point of the motion event can be introduced by prepositions, as in (5). It is worth noting that the status of these items is occasionally ambiguous, with P.H. Nguyen (2019) considering them to be prepositions. As shown by (6c), Goal-oriented constructions can display a transitive frame, where the Goal is expressed by an unmarked Ground NP, which acts as a direct object (which we label as ‘simple Goal’), or an intransitive frame, where the Goal is marked by a preposition, forming a prepositional Ground phrase (which we label as ‘complex Goal’; see also ex. 5). Additional elements can be found also in Source-oriented and Route-oriented constructions. Source-oriented constructions can also incorporate an additional element indicating the Figure’s position relative to the Ground (‘complex Source’):

- (9) a. *Hoa đi từ chợ* (Simple Source)
Hoa go from market
‘Hoa goes/went from the market’.
- b. *Hoa đi từ dưới chợ* (Complex Source)
Hoa go from down market
‘Hoa goes/went from down the market’.

In Route-oriented constructions, an additional element specifying motion conducted either along the vertical axis or the horizontal axis can be found:

- (10) a. *Hoa đi qua chợ* (Simple Route)
Hoa go cross market
‘Hoa goes/went across the market’.
- b. *Hoa đi ngang qua chợ* (Complex Route)
Hoa go horizontal cross market
‘Hoa goes/went across the market horizontally’.

3 The Acquisition of Vietnamese Directed Motion Constructions by L1 Chinese and L1 Korean Learners

The remarkable cross-linguistic differences between Vietnamese, Korean, and Chinese provide a compelling opportunity to explore the role of language typology and language-specific morpho-syntactic properties in the successful acquisition of directed motion constructions in Vietnamese. Research on second language acquisition consistently shows that the use of cross-linguistic similarities (transfer) is an integral part of the language acquisition process. When the

target language and the native language exhibit typological similarities, and both formal and functional similarities can be established, positive transfer occurs, facilitating the acquisition process (Krashen 1982; Ringbom 2006).

Talmy's typological framework provides a means to explore the complex interplay between cross-linguistic influence and the level of similarity or dissimilarity between learners' native language and target language. This framework has proved to be useful for investigating how L2 learners interpret and express motion in the L2 (Cadierno, Lund 2004). Previous research in the domain of motion events has uncovered differences between language models used by native speakers and the performance of learners across various proficiency levels. Several studies have explored the acquisition of motion constructions by learners with L1s of different typologies. In the process of second language acquisition, the expression of motion events in the L2 is influenced by L1 typology; people tend to establish meaning-form mappings based on their L1 (Cadierno 2008). In the light of Talmy's typology, studies have investigated how L2 learners acquire the characteristic meaning-form mappings of an L2 that is typologically different from their L1, but also how the performance of this type of learners compares to learners whose L1 and L2 share the same typological patterns (Cadierno 2008). Learners must learn how the semantic components of motion events are characteristically mapped onto L2 surface forms, and the acquisition of these mapping relations is rather complex, since it does not involve a one-to-one correspondence between meaning and form (Cadierno 2008). L2 learners not only have to learn the morpho-syntactic patterns of their L2, but they also must understand how to relate meaning to these forms. Therefore, when the L2 exhibits lexicalisation patterns different from those of the learner's L1, learners have to locate these differences in the morpho-syntactic structure and to understand what meaning the structure typically expresses (Jessen 2014). Thus, L2 learners must learn a different way of "thinking for speaking" (Cadierno 2004; Cadierno, Lund 2004) or learn to "rethink for speaking" (Robinson, Ellis 2008).

Notably, differences in the expression of motion events between native and non-native speakers are observed across all language combinations in Talmy's typology.¹⁹ Several studies have explored this issue in learners whose L1 is a V-framed language and L2 is an S-framed language (Carroll et al. 2012; Larrañaga et al. 2012; Cadierno, Ibarretxe-Antuñano, Hijazo-Gascón 2023), as well as in learners whose L1 is an S-framed language and L2 is a V-framed language.²⁰

¹⁹ We are grateful to an anonymous reviewer for pointing out relevant literature.

²⁰ Hendriks, Hickmann, Demagny 2008; Hendriks, Hickmann 2015; Iakovleva, Hickmann 2012; Sharpen 2016.

With respect to information density, S-framed languages are more information-dense than V-framed languages, as they condense more aspects of information into single utterances (Madlener-Charpentier, Liste Lamas 2022); in the domain of motion events, Path and Manner of motion are typically expressed in the same clause in S-framed languages, and several Ground elements/Path satellites may be attached to a single verb, resulting in elaborate Path descriptions, as e.g. Eng. “he ran down the stairs (1) through the hallway (2) out of the door (3) into the garden (4)” (Madlener-Charpentier, Liste Lamas 2022, 3). Therefore, learning an S-framed L2 should be particularly challenging for speakers with a V-framed L1. But challenges are faced also by S-framed L1 learners of a V-framed L2, for whom it can be difficult to learn to reduce information density, limiting the use of manner-of motion verbs, and to respect the boundary-crossing constraint (Madlener-Charpentier, Liste Lamas 2022).²¹

Challenges in the acquisition process also emerge in learners whose L1 and L2 belong to the same framing type.²² It has been observed that, even without having to restructure the main lexicalisation patterns, L2 learners may find challenging to increase/reduce information density (Madlener-Charpentier 2022; Madlener-Charpentier, Liste Lamas 2022).

Several studies have investigated the L2 acquisition of motion constructions by learners with different L1 types, considering the role of language typology in the expression of motion events.²³ It has been observed that not all the challenges faced by L2 learners in the acquisition of motion events can be traced back to typological differences, as they are observed across different L1 backgrounds (see e.g. Madlener-Charpentier 2022; Madlener-Charpentier, Liste Lamas 2022). In addition to typological aspects of the event construal, L2 learners have to acquire specific linguistic means. Madlener-Charpentier and Liste Lamas (2022), for example, show that the encoding of Path is challenging for L2 learners of German with typologically different L1s (S-framed: Danish, English; V-framed: French, Spanish) and that even advanced learners struggle to formally distinguish and/or functionally differentiate between different types of Path encoding satellites, as e.g. verb particles, prepositions, and directional adverbs (Madlener-Charpentier, Liste Lamas 2022, 14). Madlener-Charpentier (2022) also points out that for L1 English (S-framed language)

21 In V-framed languages, manner verbs cannot be used with telic Paths, in boundary-crossing contexts (e.g. Eng. *run into a house* – Aske 1989; Özçalışkan 2015; Madlener-Charpentier, Liste Lamas 2022).

22 Ji 2022; Ji, Hohenstein 2014; Lewandowski, Özçalışkan 2021; Paul 2014; Wu 2011; 2014; Zeng 2017.

23 See e.g. Cadierno, Ruiz 2006; Cadierno, Robinson 2009; Cadierno 2010; Madlener-Charpentier, Liste Lamas 2022; Wu, Nunome, Wang 2022.

learners of German (S-framed language) is challenging to reach target-like levels of utterance complexity and information density, even at advanced levels, even if they do not have to restructure the basic lexicalisation pattern (shared by the L1 and L2). In particular, L1 English learners of German produce less complex Path types and also less syntactically complex Ground elements within more complex Path types than L1 German speakers and L1 German learners of English (Madlener-Charpentier 2022, 250-2).

By delving into the acquisition of directed motion constructions in L2 Vietnamese by L1 Korean and L1 Chinese learners – a pairing seldom explored in the literature – this study aims to examine whether the typological similarities or differences between the learners' L1 and L2 play a role in the acquisition process of directed motion constructions, as well as to enhance our understanding of cross-linguistic and within-language variations.

A key question arises: which group, Chinese or Korean learners, has a greater advantage in mastering Vietnamese directed motion constructions? Based on the typological features and on the language-specific morpho-syntactic properties highlighted above, we expect Chinese learners to be better able to grasp these constructions than their Korean counterparts. This prediction is based on a number of similarities between Chinese and Vietnamese: specifically, the shared basic syntactic word order, the prevalent satellite-framed typology, and the collocation of Path between Figure and Ground in directed motion constructions.

The present study aims at answering the following research questions:

- RQ1 To what extent does the typological similarity or difference between the learners' first language (L1) and the target language (L2) facilitate or hinder the acquisition process of directed motion constructions in Vietnamese by L1 Chinese and L1 Korean learners? More specifically, does the L1 make a difference in the development of learners' grammatical competence?
- RQ2 Among the different types of directed motion constructions (Goal-oriented, Source-oriented, and Route-oriented), which specific type turns out to be more challenging for L1 Chinese and L1 Korean learners?

By addressing these questions, our study aims to contribute to our understanding of how first language structures, language-specific morpho-syntactic properties, and typological proximity/distance influence the acquisition of complex linguistic patterns. This research not only sheds light on the challenges faced by second language learners but also offers insights into the factors that might facilitate their successful acquisition of directed motion constructions in

Vietnamese. The results of this study will contribute to enhancing our knowledge of language acquisition processes and inform language teaching methodologies.

3.1 Research Design and Predictions

In order to address our research questions, we designed a questionnaire comprising 33 multiple-choice questions (including 8 distractors) focusing on directed motion constructions with the deictic verb *đi* 'go' in Vietnamese. The choice of this verb is mainly motivated by the fact that it is a basic motion verb expressing one of the most basic human activities (Heine, Claudi, Hünemeyer 1991, 35) and that, together with 'come', it is the most common and earliest acquired verb of motion (Miller, Johnson-Laird 1976, 531). The questionnaire aims to investigate the grammatical competence of L1 Chinese and L1 Korean learners regarding different types of directed motion constructions in Vietnamese.

Below are examples from each category of directed motion constructions, facilitating an exploration of the cross-linguistic differences among Vietnamese, Chinese, and Korean within these stimulus sentences. For each category we examined two key parameters: the kind of Path lexicalisation and its positioning in relation to Figure and Ground, as well as the use of language-specific devices.

Goal-oriented motion constructions:

(11) a. Vietnamese

| | | | | |
|------------------------------|------------------------------|----------------------------|--------------|------------------------------|
| <i>Hoa</i> _{Figure} | <i>đi</i> _{Deictic} | <i>vào</i> _{Path} | <i>trong</i> | <i>chợ</i> _{Ground} |
| Hoa | go | enter | in | market |

'Hoa goes/went into the market'. (6c)

b. Chinese

| | | | | |
|----------------------|---------------------|-------------------|-----------------------|------------------------|
| 阿花 _{Figure} | 走 _{Manner} | 进 _{Path} | 市场里 _{Ground} | (去) _{Deictic} |
| Āhuā | zǒu | jìn | shìchǎng-lǐ | qù |
| Hoa | walk | enter | market-in | (go) |

'Hoa went into the market'.

c. Korean

| | | | |
|----------------------|-----------------------|--------------------|-----------------------|
| 호아 _{Figure} | 시장에 _{Ground} | 들어 _{Path} | 갔다 _{Deictic} |
| <i>Hoa-neun</i> | <i>sijiang-e</i> | <i>deur-eo</i> | <i>ga-t-da</i> |
| Hoa-TOP | market-into | enter-CONN | GO-PAST-DECL |

'Hoa went into the market'.

The Goal-oriented motion constructions in (11) reveal different patterns in the three languages. Vietnamese (11a) displays the deictic

verb *đi* ‘go’ followed by a path verb, *vào* ‘enter’, forming a serial verb construction, without indication of manner (see the discussion on ex. 6c, § 2.2).

The Chinese sentence in (11b) contains a manner verb and a path verb, which can be also followed by a deictic verb after the Ground noun. The manner can be omitted (although it is often specified), resulting in a verb-framed construction formed by a path verb and a deictic verb (*jìn qù* 进去 ‘enter go’; see ex. 4). Alternatively, the path verb *jìn* 进 ‘enter’ can be used alone (see ex. 3a). Korean (11c) shows a verb-framed construction, where the Path slot is filled by both a path verb and a deictic verb (see ex. 7). Optionally, manner can be specified by adding a manner verb within a serial verb construction (see ex. 8). In addition, in both Vietnamese and Chinese the Ground noun is placed after the Path constituent (but before the Deictic, if present, in Chinese), whereas in Korean it precedes the Path. Finally, the goal location is introduced by a preposition in Vietnamese, while in Chinese and Korean it is marked by post-nominal items attached to the Ground noun. From the observation of the three patterns in (11), we may conclude that Chinese learners may have more advantages than Korean learners in acquiring this construction in Vietnamese from the point of view of word order, if we consider the basic components of the motion event (Figure, Ground, and Path), but they may experience negative transfer in the collocation of the deictic verb and may possibly overuse complex directional constructions, which are not possible in Vietnamese. Korean learners may experience difficulties in acquiring the correct word order of the constituents, given the typological differences between the two languages: in particular, both the collocation of the Ground and of the Deictic may pose challenges to them.

When the deictic verb ‘go’ is the only verb used in the expression of directed motion constructions, Vietnamese and Chinese are alike: in both languages the Ground is constructed as a direct object and is placed after the Path. In contrast, in Korean the Path occurs within an intransitive frame, and a postpositional marker is attached to the Ground noun. See the examples in (12):

(12) a. Vietnamese

| | | |
|------------------------------|------------------------------|------------------------------|
| <i>Hoa</i> _{Figure} | <i>đi</i> _{Deictic} | <i>chợ</i> _{Ground} |
| Hoa | go | market |

‘Hoa goes/went to the market’.

b. Chinese

| | | |
|----------------------|----------------------|----------------------|
| 阿花 _{Figure} | 去 _{Deictic} | 市场 _{Ground} |
| <i>Āhuā</i> | <i>qù</i> | <i>shìchǎng</i> |
| Hoa | go | market |

‘Hoa goes/went to the market’.

c. Korean

| | | |
|---------------------------|-----------------------|-----------------------|
| 호아는 _{Figure} | 시장에 _{Ground} | 갔다 _{Deictic} |
| <i>Hoa-neun</i> | <i>sijiang-e</i> | <i>ga-t-da</i> |
| Hoa-TOP | market-at | go-PAST-DECL |
| ‘Hoa went to the market.’ | | |

The patterns displayed in (12) suggest that Chinese learners should be facilitated in the acquisition of directed motion expressions containing only a deictic verb, compared to Korean learners. Generally speaking, we expect that Chinese learners acquire Goal-oriented directed motion constructions more easily.

Source-oriented motion constructions:

(13) a. Vietnamese

| | | | |
|-----------------------------------|------------------------------|-----------------------------|------------------------------|
| <i>Hoa</i> _{Figure} | <i>đi</i> _{Deictic} | <i>từ</i> _{Source} | <i>chợ</i> _{Ground} |
| Hoa | go | from | market |
| ‘Hoa comes/came from the market.’ | | | |

b. Chinese

| | | | |
|-----------------------------|---------------------|----------------------|----------------------|
| 阿花 _{Figure} | 从 _{Source} | 市场 _{Ground} | 来 _{Deictic} |
| <i>Āhuā</i> | <i>cóng</i> | <i>shìchǎng</i> | <i>lái</i> |
| Hoa | from | market | come |
| ‘Hoa came from the market.’ | | | |

c. Korean

| | | |
|-----------------------------|-------------------------------|-----------------------|
| 호아는 _{Figure} | 시장에서 _{Ground-Source} | 왔다 _{Deictic} |
| <i>Hoa-neun</i> | <i>sijiang-eseo</i> | <i>wa-t-da</i> |
| Hoa-TOP | market-from | come-PAST-DECL |
| ‘Hoa came from the market.’ | | |

As it can be seen from the examples, Source-oriented motion constructions reveal a significant contrast between Vietnamese and Chinese/Korean compared to Goal-oriented constructions. In Vietnamese, the locative phrase expressing the source of the motion follows the main verb (13a), whereas in both Chinese and Korean it precedes the main verb (13b,c). It is worth noting that in both Chinese and Vietnamese the Source is constructed as a prepositional phrase, but the position of prepositional phrases is different in the two languages: while both are VO languages, in Vietnamese prepositional phrases follow the verb, while in Chinese they precede the verb, as in OV languages (Dryer 2003). Therefore, both Chinese and Korean learners may have difficulties in acquiring the correct word order of Vietnamese Source-oriented constructions.

Route-oriented motion constructions:

(14) a. Vietnamese

*Hoa*_{Figure} *đi*_{Deictic} *qua*_{Path} *chợ*_{Ground}
Hoa go pass market
'Hoa goes/went through the market'.

b. Chinese

阿花_{Figure} 走_{Manner} 过_{Path} 市场_{Ground}
Āhuā *zǒu* *guò* *shìchǎng*
Hoa walk pass market
'Hoa walked through the market'.

c. Korean

호아_{Figure}는 시장을_{Ground} 지나_{Path} 간다_{Deictic}
Hoa-neun *sijiang-eul* *jin-a* *ga-t-da*
Hoa-TOP market-OBJ pass-CONN go-PAST-DECL
'Hoa went through the market'.

In the Route-oriented motion constructions in (14a), the deictic verb *đi* 'go' is followed by the trajectory path verb *qua* 'pass'. In the Chinese construction in (14b), the path verb follows the manner verb *zǒu* 走 'walk', specifying manner of motion: both the Manner and the Path are specified by two different constituents, displaying a typical satellite-framed/equipollently-framed construction.²⁴ Finally, the Korean example (14c) shows a verb-framed construction, where the path verb *jin-* 'pass' is followed by the deictic verb *ga-* 'go', as required in the expression of spontaneous directed motion constructions. In addition, it should be noted that all the three languages show a transitive frame in this construction, since the Ground noun is constructed as a direct object. We expect that in this case word order plays a crucial role in facilitating the acquisition of the construction: Chinese learners may find it easier to acquire this construction than Korean students since in their L1 the Path is placed between Figure and Ground, whereas in Korean it follows the Ground.

In summary, among the three subtypes of directed motion constructions (Goal, Source, and Route), the Source-oriented constructions in Chinese and Korean exhibit more significant differences from Vietnamese than the other constructions. Furthermore, compared to

²⁴ Note that, whereas a verb like *jin* 进 'enter' can be used alone as a path verb, the verb *guò* 过 cannot (see Lamarre 2008, 77). The use of *guò* 过 as main verb seems to be limited only to certain objects, like *guò mǎlù* 过马路 'cross the road'.

Korean, Chinese displays patterns that are more similar to Vietnamese, especially in terms of word order, but also in terms of language-specific devices used in the expression of motion events.

Based on the cross-linguistic variation observed, we make the following predictions:

- a. Generally, the grammatical competence of L1 Chinese learners in Vietnamese directed motion constructions is higher compared to that of L1 Korean learners.
- b. The directed motion construction that proves more challenging for both L1 Chinese and L1 Korean learners is the Source-oriented construction.

An additional factor to consider in assessing L2 learners' competence is language proficiency. Therefore, we expand our research questions to include the following:

RQ3 Is there a correlation between learners' proficiency levels and their mastery of different Vietnamese directed motion constructions?

In this regard, we expect students with higher proficiency levels to demonstrate a better understanding of the structure and properties of Vietnamese directed motion constructions.

3.2 Data Collection

In this study, we used a total of 33 stimulus sentences, divided into 25 sentences expressing different types of motion events and 8 distractors [tab. 1]:

Table 1 Stimuli types

| Stimuli types | | Number of sentences |
|-----------------|-----------------|---------------------|
| Directed Motion | Goal-oriented | 15 |
| | Source-oriented | 5 |
| | Route-oriented | 5 |
| Distractors | | 8 |
| Total | | 33 |

Two methods were employed for data collection: an online survey administered through Google Forms and direct surveys conducted in classroom settings. The survey consisted of 33 multiple-choice questions, each providing three options, aimed at assessing whether learners recognise the correct structure of directed motion events.

Participants were required to select the most appropriate sentence structure, specifically focusing on the arrangement of the Figure, Path, and Ground, as well as the position of location/source/goal prepositional phrases in directed motion construction featuring the verb *đi* 'to go' in Vietnamese.

(15) **Example Question:** Choose the sentence with the correct word order:

- a. *Đi*_{Deictic} *vào*_{Path} *Hoa*_{Figure} *chợ*_{Ground}
go enter Hoa market
Intended: 'Hoa goes/went into the market'.
- b. *Hoa*_{Figure} *đi*_{Deictic} *vào*_{Path} *chợ*_{Ground}
Hoa go enter market
'Hoa goes/went into the market'.
- c. *Đi*_{Deictic} *Hoa*_{Figure} *chợ*_{Ground} *vào*_{Path}
go Hoa market enter
Intended: 'Hoa goes/went into the market'.

In this example, the correct answer is (15b), where the Path is appropriately placed between the Figure and the Ground noun.

Sentences in which the verb *đi* 'to go' appears in other types of constructions were used as distractors. These sentences include those where *đi* 'to go' precedes another verb in a purpose relation, or those where it introduces the means of transport, as e.g.:

- (16) a. *Hoa* *đi* *xem* *phim* *cho* *vui*
Hoa go watch movie for fun
'Hoa goes/went to watch movies for fun'.
- b. *Hoa* *đi* *cáp treo* *lên* *núi Yên Tử*
Hoa go cable go.up mountain Yen Tu
'Hoa goes/went up to Yen Tu mountain by cable'.

The questionnaire was administered to 58 Chinese learners and 63 Korean learners of Vietnamese, all enrolled as full-time students at Vietnam National University Hanoi. These learners had varying levels of experience in learning Vietnamese, ranging from 7 to 30 months at the time of the study. Additionally, a control group consisting of 31 native Vietnamese speakers, all full-time students at Vietnam National University Hanoi during the test period, was also included in the study [tab. 2].

Table 2 Participants by L1 background

| L1 background | Number of participants |
|----------------------------|------------------------|
| L1 Chinese learners | 58 |
| L1 Korean learners | 63 |
| Vietnamese native speakers | 31 |
| Total | 152 |

In order to assess the students' proficiency levels, we considered two key factors: their placement in suitable language classes and their self-reported evaluation of their language skills.

First, we examined their placement in appropriate language classes. At the time of testing, Korean and Chinese students had been studying at Vietnam National University Hanoi for 6 months. It is important to note that they had received formal education in South Korea and China prior to their immersion program in Vietnam. At Vietnam National University Hanoi, the students were divided into two classes: one from A2 and B1 level and the other from B2 and C1 level. Consequently, all the students were at the intermediate to advanced level.

We also assessed their language proficiency skills using a self-assessment questionnaire based on the CEFR scale of competence. They were given four proficiency options corresponding to levels A2, B1, B2, and C1 in the European CEFR framework.

Self-evaluation proficiency question:

Choose the level that best matches your knowledge of Vietnamese from the four levels below:

(i) Level 1: I can understand frequently used words and phrases related to everyday situations such as shopping, accommodation, and professions. I can understand simple texts and write short, coherent texts about familiar topics. I can also express simple opinions and connect sentences using basic conjunctions.

(ii) Level 2: I can understand the main points of clear, standard speech and texts on familiar topics. I can express opinions, describe experiences, and discuss plans. I can write detailed texts on a wide range of topics, connect ideas logically, and give reasons and explanations for opinions. I can engage in more complex conversations and deal with a variety of social situations with ease.

(iii) Level 3: I can understand abstract topics and express ideas fluently. I can write clear, detailed essays and reports, present arguments effectively, and respond appropriately to different registers and styles of communication. I can also understand implicit meanings and cultural subtleties in conversations and texts.

(iv) Level 4: I can understand long and demanding texts and grasp implicit meanings. I can speak spontaneously and fluently without having to search for words. I can use the language flexibly and effectively in social, professional, or academic situations. I can express myself on complex subjects in a clear and well-structured way. I can distinguish complexities of meaning in relation to complex subjects.

In cases where there was a discrepancy between their class placement and their self-assessment (such as a student placed in an intermediate class self-assessing as B2, or a student from an advanced class self-assessing as B1), we considered their self-identified proficiency level. As a result, 94 students were classified as intermediate (A2 and B1), while 27 were classified as advanced (B2 and C1) [tab. 3].

Table 3 Participants by Proficiency level of Vietnamese

| Proficiency level | Number of participants |
|-----------------------------------|------------------------|
| Intermediate learners (A2 and B1) | 94 |
| Advanced learners (B2 and C1) | 27 |
| Native speakers | 31 |
| Total | 152 |

3.3 Results

In this section, we present the results of the questionnaire. Within each construction (Goal-oriented, Source-oriented, and Route-oriented), we consider both L1 (Chinese, Korean, and Vietnamese) and proficiency levels (intermediate, advanced, and native).

Before discussing the results, it is important to outline the methodology used to compare the significance difference between two independent proportions. Throughout this paper, we conduct a hypothesis test comparing two independent population proportions, denoted as p_A and p_B . This method assumes that the two samples are simple random samples that are independent, and the number of successes and failures is at least five for each of the samples. We apply this method when these assumptions are met. The difference of two proportions follows an approximate normal distribution. The null hypothesis states that the two proportions are the same, i.e. $H_0: p_A = p_B$. In particular, p_A and p_B represent the proportions k_A/n_A and k_B/n_B , respectively, in which n_A and n_B represent the total numbers of answers in two independent samples, A and B; k_A and k_B represent the numbers of correct answers within each sample that are of particular interest. The one-tailed probabilities (p-values) associated with the resulting value of z will be used, and the significance level $\alpha = 0.05$ is utilised to reject the null hypothesis H_0 if the p-value is less than α .

Tables 4-6 summarise the main results of the questionnaire [tabs 4-6].

Table 4 Goal vs Source vs Route distinction by L1 background

| Path types | Native | Chinese | Korean |
|------------|--------|--------------|--------------|
| Goal | 95.3% | 88.6% | 87% |
| Source | 99.4% | 74.5% | 65.4% |
| Route | 100% | 92.8% | 73.7% |

Table 5 Goal vs Source vs Route distinction by proficiency level

| Path types | Native | Intermediate | Advanced |
|------------|--------|--------------|----------|
| Goal | 95.3% | 87.2% | 89.6% |
| Source | 99.4% | 65.1% | 85.9% |
| Route | 100% | 80.6% | 90.4% |

Table 6 Goal vs Source vs Route distinction by L1 background and proficiency level

| Path types | Native | Chinese Adv. | Chinese Inter. | Korean Adv. | Korean Inter. |
|------------|--------|--------------|----------------|-------------|---------------|
| Goal | 95.3% | 90.2% | 88% | 88.7% | 86.7% |
| Source | 99.4% | 85.9% | 69.8% | 86% | 61.5% |
| Route | 100% | 94.1% | 92.2% | 84% | 71.7% |

The data presented in tables 4, 5, and 6 confirm our initial predictions (§ 3.1). First, our findings confirm the advantage that Chinese learners have over their Korean counterparts in understanding these constructions. Chinese learners generally outperform Korean learners across all Path types; however, this difference is significant only for Source-oriented ($p = 0.0075$) and Route-oriented constructions ($p < .0001$), but not for Goal-oriented constructions ($p = 0.3435$). The advantage of Chinese learners over Korean learners is significant only at the intermediate level ($p < .0001$). Moreover, among the three types of Path constructions, Source-oriented constructions emerge as more challenging for learners, especially for those at the intermediate level. This trend emerges in both L1 backgrounds, indicating a consistent difficulty faced by learners in understanding and recognising the syntactic properties and arrangement of components of Source-oriented directed motion events. Furthermore, the data also reveal that learners' understanding of the syntactic properties of this construction increases with increased proficiency, indicating the crucial role of language proficiency in mastering these linguistic structures.

To sum up, our data offer evidence supporting our initial hypotheses, confirming the influence of both L1 background and proficiency levels on learners' ability to navigate the complexities of directed motion constructions. In what follows, we will delve into specific constructions to discern the structures that pose notable challenges for learners.

3.3.1 Goal-oriented Constructions

As we have seen in § 2.4, Goal-oriented constructions can be classified into two subtypes: those displaying a transitive frame, where the Goal is expressed by an unmarked Ground NP, which acts as a direct object (simple Goal), and those displaying an intransitive frame, where the Goal is marked by a preposition, forming a prepositional ground phrase (complex Goal). The latter pattern is more complex due to the inclusion of an extra element indicating the Figure's location relative to the Ground.

(17) Goal types

- a. Simple Goal: Figure + Go + Goal + Ground (ex. 6c, 12a)
- b. Complex Goal: Figure + Go + Goal + Location + Ground (ex. 5, 11a)

The data in tables 7, 8, and 9 demonstrate distinct challenges among the two types of Goal constructions, with complex Goal constructions proving to be notably more difficult for learners, especially among intermediate levels [tabs 7-9]. This seems to suggest that the selection of a prepositional phrase over a noun phrase presents substantial hurdles for learners.²⁵

Table 7 Simple Goal vs Complex Goal distinction by L1 background

| Goal type | Native | Chinese | Korean |
|--------------|--------|---------|--------|
| Simple Goal | 100% | 99.4% | 97.9% |
| Complex Goal | 88.7% | 76.1% | 74.3% |

Table 8 Simple Goal vs Complex Goal distinction by proficiency level

| Goal type | Native | Advanced | Intermediate |
|--------------|--------|----------|--------------|
| Simple Goal | 100% | 97.5% | 98.9% |
| Complex Goal | 88.7% | 79% | 74.1% |

²⁵ We are grateful to an anonymous reviewer for suggesting this point.

Table 9 Simple Goal vs Extended Goal distinction by L1 background and proficiency level

| Goal type | Native | Chinese Adv. | Chinese Inter. | Korean Adv. | Korean Inter. |
|--------------|--------|--------------|----------------|--------------|---------------|
| Simple Goal | 100% | 98% | 100% | 96.7% | 98.1% |
| Complex Goal | 88.7% | 80.4% | 74.4% | 76.7% | 73.9% |

These data show that simple Goal constructions are quite easy to grasp for both groups of learners, whereas complex Goal constructions are more challenging. This may be due to the fact that in complex Goal constructions a marker of goal location is used, the type and collocation of which is different in learners' L1 language (see § 2.4): both Chinese and Korean make use of post-nominal items to mark location (§ 2.4), while Vietnamese makes use of prepositions. Therefore, both word order and the language-specific devices used to mark goal location make the acquisition of these constructions more difficult for learners. No significant difference related to proficiency is observed in the two groups of learners.

3.3.2 Source-oriented Constructions

Source-oriented constructions also encompass two subtypes, with the latter being more elaborate, incorporating an additional element indicating the Figure's position relative to the Ground (see § 2.4).

(18) Source types

Simple Source: Figure + Go + Source + Ground (ex. 9a)

Complex Source: Figure + Go + Source + Position + Ground (ex. 9b)

Tables 10, 11, and 12 show the results for both types of Source-oriented constructions [tabs 10-12].

Table 10 Simple Source vs Extended Source distinction by L1 background

| Source type | Native | Chinese | Korean |
|----------------|--------|------------|--------------|
| Simple Source | 100% | 84.5% | 74.6% |
| Complex Source | 99.2% | 72% | 63.1% |

Table 11 Simple Source vs Extended Source distinction by proficiency level

| Source type | Native | Advanced | Intermediate |
|----------------|--------|----------|--------------|
| Simple Source | 100% | 96.3% | 74.5% |
| Complex Source | 99.2% | 83.3% | 62.8% |

Table 12 Simple Source vs Extended Source distinction by L1 background and proficiency level

| Source type | Native | Chinese Adv. | Chinese Inter. | Korean Adv. | Korean Inter. |
|----------------|--------|--------------|----------------|-------------|---------------|
| Simple Source | 100% | 100% | 78% | 90% | 71.7% |
| Complex Source | 99.2% | 82.4% | 67.7% | 85% | 59% |

The data show that extended Source constructions pose significantly greater difficulties for learners, especially at intermediate levels. This may be due to the fact that the specification of the position adds complexity to the construction, especially considering that both Source and Position are encoded differently in the learners' L1 (§§ 2.4, 3.1). This may be the reason why this construction is more difficult to grasp, especially at lower levels of proficiency. The data also show that, although learners' understanding of the syntactic properties of these constructions increases with increasing proficiency levels ($p = 0.0009$ for Korean learners, $p = 0.0118$ for Chinese learners), learners' competence at the advanced level in complex source constructions remains lower than that in simple Source constructions in both groups of learners ($p = 0.0051$). The understanding of simple Source constructions by advanced learners, on the other hand, approaches that of native speakers. It is worth noting that both Korean and Chinese advanced learners seem to have a better understanding of complex Source constructions than of complex Goal constructions ($p = 0.0014$; compare table 12 with table 9).

3.3.3 Route-oriented Constructions

Route-oriented constructions can also be divided into two subtypes, with the latter being more complex and introducing an additional element specifying motion conducted either along the vertical axis or the horizontal axis (§ 2.4).

(19) Route types

Simple Route: Figure + Go + Route + Ground (ex. 10a)

Complex Route: Figure + Go + Axis + Route + Ground (ex. 10b)

The results for these two types of constructions are summarised in tables 13, 14, and 15 [tabs 13-15].

Table 13 Simple Route vs Complex Route distinction by L1 background

| Route type | Native | Chinese | Korean |
|---------------|--------|---------|--------------|
| Simple Route | 100% | 91.5% | 69.4% |
| Complex Route | 99.2% | 72% | 63.1% |

Table 14 Simple Route vs Complex Route distinction by proficiency level

| Route type | Native | Advanced | Intermediate |
|---------------|--------|----------|--------------|
| Simple Route | 100% | 100% | 92.6% |
| Complex Route | 100% | 88% | 77.7% |

Table 15 Simple Route vs Complex Route distinction by L1 background and proficiency Level

| Route type | Native | Chinese Adv. | Chinese Inter. | Korean Adv. | Korean Inter. |
|---------------|--------|--------------|----------------|-------------|---------------|
| Simple Route | 100% | 100% | 97.6% | 100% | 88.7% |
| Complex Route | 100% | 92.6% | 90.9% | 80% | 67.5% |

As in the case of Goal-oriented and Source-oriented constructions, the complex pattern proves to be more challenging for learners, especially at intermediate levels. However, Chinese intermediate learners demonstrate consistently higher competence in Route constructions than Korean learners at the same level ($p < .0001$). In this case, positive transfer from the L1 may play a role, since Vietnamese and Chinese show comparable structures in expressing this kind of motion constructions, as they both place the Ground after the Path, while Korean put the Ground before the Path (see § 2.4 and § 3.1, ex. 14).

4 Conclusions

Directed motion constructions exhibit a high degree of cross-linguistic and within-language variation. The notable differences across Vietnamese, Korean, and Chinese offer a compelling opportunity to explore the influence of language typology and language-specific morpho-syntactic properties on the effective acquisition of directed motion constructions in L2 Vietnamese. Our investigation represents a first step in the exploration of this still unexplored field,

aimed at examining the linguistic competence of L1 Chinese and L1 Korean learners.

The findings of our investigation indicate that cross-linguistic differences play a crucial role in the acquisition of directed motion patterns. Chinese learners generally outperform their Korean counterparts, and these differences stem from distinct patterns in word order and the use of language-specific devices. In fact, the most challenging directed motion construction appears to be the Source-oriented one (compared to Goal and Route, $p < .0001$ in both cases), whose structure significantly departs from the one employed in their L1. The most challenging structure appears to be the complex one (compared to the simple one, $p < .0001$), in which more elements related to the expression of motion are involved, adding complexity to the construction.

Furthermore, the results of the questionnaire also reveal that language proficiency too plays a role in the mastery of these constructions: learners' competence increases with increased proficiency.

These findings also carry significant pedagogical implications, emphasising the necessity of considering both the complexity of the target language and the structures of learners' L1 in developing language curricula and teaching methods (Odlin 1989; Selinker, Gass 1992; Yu, Odlin 2016). Recognising typological differences and similarities between languages can assist educators in tailoring their approaches to accommodate learners' specific needs and challenges. For example, when the target language and the native language exhibit typological similarities, and both formal and functional similarities can be established, leveraging the similarities between learners' native language (L1) and the target language (L2) can facilitate more effective language learning experiences.

In addition, this study also underscores the significance of considering both linguistic typology and proficiency in language teaching. In fact, our findings align with previous research highlighting the significance of language proficiency levels in language acquisition. Tailored language programs focusing on both linguistic complexity and learners' proficiency levels can significantly enhance the effectiveness of language teaching practices. By integrating these insights into L2 Vietnamese language teaching, it could help in developing pedagogical tools and methods that target the needs of learners with different L1s more effectively. Effective pedagogical methods, incorporating contrastive analysis and explicit instruction, empower learners to overcome challenges arising from typological disparities. This approach fosters a deeper understanding of Vietnamese linguistic structures among learners from diverse linguistic backgrounds.

This study lays the groundwork for further investigations into the acquisition of directed motion constructions in L2 Vietnamese, aiming to deepen our understanding of the underlying mechanisms in the

acquisition process. Future studies should expand their focus to include diverse verb types, encompassing both manner and path verbs, and explore various sentence structures. Additionally, incorporating various tasks designed to assess both linguistic competence and language performance would substantially contribute to our knowledge of the acquisition of these constructions in L2 Vietnamese.

Bibliography

- Ameka, F.K.; Essegbey, J. (2013). "Serialising Languages: Verb-framed, Satellite-framed or Neither?". *Ghana Journal of Linguistics*, 2(1), 19-38.
- Aske, J. (1989). "Path Predicates in English and Spanish: A Closer Look". *Proceedings of the Fifteenth Annual Meeting of the Berkeley Linguistics Society*, 1-14. <https://doi.org/10.3765/bls.v15i0.1753>.
- Beavers, J. (2008). "On the Nature of Goal Marking and Delimitation: Evidence from Japanese". *Journal of Linguistics*, 44, 283-316. <https://www.jstor.org/stable/40058045>.
- Beavers, J.; Levin, B.; Tham, S.W. (2010). "The Typology of Motion Expressions Revisited". *Journal of Linguistics*, 46, 331-77. <https://doi.org/10.1017/S0022226709990272>.
- Beecher, H. (2004). *Three Varieties of Serial Verb Constructions in Vietnamese*. Draft paper. Ms. University of California San Diego.
- Brown, L.C. (1999). *The Grammaticalization of Directed Motion in Vietnamese* [PhD dissertation]. Boulder: University of Colorado.
- Cadierno, T. (2004). "Expressing Motion Events in a Second Language: A Cognitive Typological Perspective". Achard, M.; Niemeier, S. (eds), *Cognitive Linguistics, Second Language Acquisition, and Foreign Language Teaching*. Berlin; New York: Mouton de Gruyter, 13-49. <https://doi.org/10.1515/9783110199857.13>.
- Cadierno, T. (2008). "Learning to Talk About Motion in a Foreign Language". Robinson, P.; Ellis, N.C. (eds), *Handbook of Cognitive Linguistics and Second Language Acquisition*. New York; London: Routledge, 239-75. <https://doi.org/10.4324/9780203938560-20>.
- Cadierno, T. (2010). "Motion in Danish as a Second Language: Does the Learner's L1 Make a Difference?". Han, Z.H.; Cadierno, T. (eds), *Linguistic Relativity in SLA: Thinking for Speaking*. Clevedon: Multilingual Matters, 1-33. <https://doi.org/10.21832/9781847692788-003>.
- Cadierno, T.; Lund, K. (2004). "Cognitive Linguistics and Second Language Acquisition: Motion Events in Typological Framework". Van Patten, B. et al. (eds), *Form-Meaning Connections in Second Language Acquisition*. Mahwah (NJ): Lawrence Erlbaum, 139-54. <https://doi.org/10.4324/9781410610607>.
- Cadierno, T.; Ruiz, L. (2006). "Motion Events in Spanish L2 Acquisition". *Annual Review of Cognitive Linguistics*, 4, 183-216. <https://doi.org/10.1075/arcl>.
- Cadierno, T.; Robinson, P. (2009). "Language Typology, Task Complexity and the Development of L2 Lexicalization Patterns for Describing Motion Events". *Annual Review of Cognitive Linguistics*, 7(1), 245-76. <https://doi.org/10.1075/arcl.7.10cad>.

- Cadierno, T.; Ibarretxe-Antuñano, I.; Hijazo-Gascón, A. (2023). "Reconstructing the Expression of Placement Events in Danish as a Second Language". *Frontiers in Psychology*, 13, 1-17. <https://doi.org/10.3389/fpsyg.2022.922682>.
- Carroll, M. et al. (2012). "Tracing Trajectories: Motion Event Construal by Advanced L2 French-English and L2 French-German Speakers". *Language, Interaction and Acquisition*, 3(2), 202-30. <https://doi.org/10.1075/Lia.3.2.03car>.
- Chen, L.; Guo, J. (2010). "From Language Structures to Language Use: A Case from Mandarin Motion Expression Classification". *Chinese Language and Discourse*, 1(1), 31-65. <https://doi.org/10.1075/cld.1.1.02che>.
- Chen, Z. (2023). "Directional Serial Verb Constructions in Mandarin: A Neo-constructionist Approach". *Journal of Linguistics*, 59(4), 697-736. <https://doi.org/10.1017/s0022226723000129>.
- Choi, S. (2006). "Influence of Language-specific Input on Spatial Cognition: Categories of Containment". *First Language*, 26(2), 207-32. <https://doi.org/10.1177/0142723706060748>.
- Choi, S. (2009). "Typological Differences in Syntactic Expressions of Path and Causation". Gathercole, V.M. (ed.), *Routes to Language: Studies in Honor of Melissa Bowerman*. Mahwah (NJ): Lawrence Erlbaum, 169-94.
- Choi, S. (2011). "Language-specificity of Motion Event Expressions in Young Korean Children". *Language, Interaction & Acquisition*, 2(1), 157-84. <https://doi.org/10.1075/bct.50.07cho>.
- Choi, S. (2018). "Language-Specificity in Motion Expression: Early Acquisition in Korean Compared to French and English". Hickmann, M.; Veneziano, E.; Jisa, H. (eds), *Sources of Variation in First Language Acquisition: Languages, Contexts, and Learners*. Amsterdam: John Benjamins, 103-22. <https://doi.org/10.1075/tilar.22.06cho>.
- Choi, S.; Bowerman, M. (1991). "Learning to Express Motion Events in English and Korean: The Influence of Language-specific Lexicalization Patterns". *Cognition*, 41(1-3), 83-121. <https://doi.org/10.1017/s0272263108080315>.
- Choi, S.; Lantolf, J.P. (2008). "Representation and Embodiment of Meaning in L2 Communication: Motion Events in the Speech and Gesture of Advanced L2 Korean and L2 English Speakers". *Studies in Second Language Acquisition*, 30(2), 191-224. <https://doi.org/10.1017/s0272263108080315>.
- Croft, W.A. et al. (2010). "Revising Talmy's Typological Classification of Complex Event Constructions". Boas, H.C. (ed.), *Contrastive Studies in Construction Grammar*. Amsterdam: John Benjamins, 201-35. <https://doi.org/10.1075/cal.10.09cro>.
- Dryer, M.S. (2003). "Word Order in Sino-Tibetan Languages from a Typological and Geographical Perspective". Thurgood, G.; LaPolla, R.J. (eds), *The Sino-Tibetan Languages*. London: Routledge, 43-55. <https://doi.org/10.4324/9780203221051-10>.
- Guo Yan 郭燕; Yang Jixue 杨姬雪; Deng Yu 邓宇 (2022). "Hanyu bianjie kuayue yundong shijian de shizheng yanjiu" 汉语边界跨越运动事件的实证研究 (An Empirical Study of Chinese Boundary-crossing Motion Events). *Leshan Shifan Xueyuan Xuebao* 乐山师范学院学报, 37(7), 45-54.
- Heine, B.; Claudi, U.; Hünnemeyer, F. (1991). *Grammaticalization: A Conceptual Framework*. Chicago: The University of Chicago Press.
- Hendriks, H.; Hickmann, M.; Demagny, A.-C. (2008). "How Adult English Learners of French Express Caused Motion: A Comparison with English and

- French Natives". *Acquisition et interaction en langue étrangère*, 27, 15-41. <https://doi.org/10.4000/aile.3973>.
- Hendriks, H.; Hickmann, M. (2011). "Expressing Voluntary Motion in a Second Language: English Learners of French". Cook, V.; Bassetti, B. (eds), *Language and Bilingual Cognition*. New York: Psychology Press, 315-40.
- Hendriks, H.; Hickmann, M. (2015). "Finding One's Path into Another Language: On the Expression of Boundary Crossing by English Learners of French". *The Modern Language Journal*, 99, 14-31. <https://doi.org/10.1111/j.1540-4781.2015.12176.x>.
- Hu Xiaohui 胡晓慧 (2012). *Hanyu quxiang dongci yufahua wenti yanjiu* 汉语趋向动词语法化问题研究 (Research on the Grammaticalization of Directional Verbs in Chinese). Guilin: Guangxi Shifan Daxue Chubanshe.
- Iakovleva, T.; Hickmann, M. (2012). "Contraintes typologiques dans l'acquisition d'une langue étrangère: L'expression du mouvement chez les apprenants russophones du français". *Langages*, 188(4), 1-57. <https://doi.org/10.3917/Lang.188.0041>.
- Jessen, M. (2014). "The Expression of Path in L2 Danish by German and Turkish Learners". *Vigo International Journal of Applied Linguistics*, 11, 88-110.
- Ji Yinglin 纪瑛琳 (2022). "Kongjian yundong shijian de eryu biaoda he hanyu fuhedongci de xide" 空间运动事件的二语表达和汉语复合动词的习得 (The Acquisition of Chinese RVCs in Motion Event Expressions). *Shenzhen Daxue Xuebao* 深圳大学学报 (Renwen shehui kexue ban 人文社科版), 39(1), 49-59.
- Ji, Y.; Hendriks, H.; Hickmann, M. (2011). "The Expression of Caused Motion Events in Chinese and in English: Some Typological Issues". *Linguistics*, 49, 1041-77. <https://doi.org/10.1515/ling.2011.029>.
- Ji, Y.; Hohenstein, J. (2014). "The Syntactic Packaging of Caused Motion Components in a Second Language: English Learners of Chinese". *Lingua*, 140, 100-16. <https://doi.org/10.1016/j.lingua.2013.11.009>.
- Ji, Y.; Hohenstein, J. (2017). "Conceptualising Voluntary Motion Events Beyond Language Use: A Comparison of English and Chinese Speakers' Similarity Judgments". *Lingua*, 195, 57-71. <https://doi.org/10.1016/j.lingua.2017.05.007>.
- Krashen, S. (1982). *Principles and Practice in Second Language Acquisition*. Oxford: Pergamon Press.
- Lamarre, C. (2007). "The Linguistic Encoding of Motion Events in Chinese: With Reference to Cross-dialectal Variation". Lamarre, C.; Ohori, T. (eds), *Typological Studies of the Linguistic Expression of Motion Events*. Vol. 1, *Perspective Form East and Southeast Asia*. Tokyo: Center for Evolutionary Cognitive Sciences at the University of Tokyo, 3-33.
- Lamarre, C. (2008). "The Linguistic Categorization of Deictic Direction in Chinese – with Reference to Japanese". Xu, D. (ed.), *Space in Languages of China. Cross-linguistic, Synchronic and Diachronic Perspectives*. Berlin: Springer, 69-97. https://doi.org/10.1007/978-1-4020-8321-1_4.
- Lamarre, C. (2013). "Le déplacement en chinois au cœur des débats typologiques". *Faits de Langues*, 42, 175-97. <https://doi.org/10.1163/19589514-042-01-900000011>.
- Lamarre, C. et al. (2022). "Deictic Directionals Revisited in the Light of Advances in Typology". Sarda, L.; Fagard, B. (eds), *Neglected Aspects of Motion-Event Description: Deixis, Asymmetries, Constructions*. Amsterdam: John Benjamins, 69-94. *Human Cognitive Processing* 72. <https://doi.org/10.1075/hcp.72.04lam>.
-

- Larrañaga, P. et al. (2012). "L1 Transfer in the Acquisition of Manner and Path in Spanish by Native Speakers of English". *International Journal of Bilingualism*, 16(1), 117-38. <https://doi.org/10.1177/1367006911405577>.
- Lewandowski, W.; Özçalışkan, Ş. (2021). "How Language Type Influences Patterns of Motion Expression in Bilingual Speakers". *Second Language Research*, 37(1), 27-49. <https://doi.org/10.1177/0267658319877214>.
- Li, F. (1997). "Cross-linguistic Lexicalization Patterns: Diachronic Evidence from Verb-complement Compounds in Chinese". *STUF – Language Typology and Universals*, 50(3), 229-52. <https://doi.org/10.1524/stuf.1997.50.3.229>.
- Li, C.N.; Thompson, S.A. (1981). *Mandarin Chinese. A Functional Reference Grammar*. Berkeley: University of California Press.
- Liang Yinfeng 梁银峰 (2006). *Hanyu dongbu jiegou de chansheng yu yanbian* 汉语动补结构的产生与演变 (The Emergence and Evolution of Verb-complement Structures in Chinese). Shanghai: Xuelin chubanshe.
- Liang Yinfeng 梁银峰 (2007). *Hanyu quxiang dongci de yufahua* 汉语趋向动词的语法化 (The Grammaticalization of Directional Verbs in Chinese). Shanghai: Xuelin chubanshe.
- Liang Yinfeng 梁银峰; Wu Fuxiang 吴福祥; Bei Luobei 贝罗贝 (2008). "Hanyu quxiang buyu jiegou de chansheng yu yanbian" 汉语趋向补语结构的产生与演变 (The Emergence and Evolution of Directional Complement Structures in Chinese). *Lishi yuyanxue yanjiu* 历史语言学研究, 1, 164-81.
- Liao, Y. et al. (2020). "Going Places in Dutch and Mandarin Chinese: Conceptualising the Path of Motion Cross-linguistically". *Language, Cognition and Neuroscience*, 35(4), 498-520. <https://doi.org/10.1080/23273798.2019.1676455>.
- Lin, J. (2019). *Encoding Motion Events in Mandarin Chinese: A Cognitive Functional Study*. Amsterdam: John Benjamins. <https://doi.org/10.1075/scld.11>.
- Lin, J.; Sun, C. (2016). "Prepositions and Preposition Phrases". Huang, C.-R.; Shi, D. (eds), *A Reference Grammar of Chinese*. Cambridge: Cambridge University Press, 353-400. <https://doi.org/10.1017/CB09781139028462>.
- Liu Lijin 刘礼进 (2014). "Hanyu zenyang bianma weiyi de lujing xinxi—Xiandai Hanyu weiyi Shijian de leixingxue kaocha" 汉语怎样编码位移的路径信息—现代汉语位移事件的类型学考察 (How Does Chinese Encode Path of Motion: A Typological Study of Motion Events in Modern Chinese). *Shijie Hanyu jiaoxue* 世界汉语教学, 3, 322-32.
- Ly, N.T. (2019). *A Cognitive Study of Lexical Expressions Denoting Motion in English and Vietnamese* [PhD dissertation]. Da Nang: The University of Da Nang.
- Ma Yunxia 马云霞 (2008). *Hanyu lujing dongci de yanbian yu weiyi Shijian de biaoda* 汉语路径动词的演变与位移事件的表达 (The Development of Path Verbs in Chinese and the Expression of Motion Events). Beijing: Zhongyang minzu daxue chubanshe.
- Madlener-Charpentier, K. (2022). "Learned Attention Beyond Typological Bootstrapping: Constructional Repertoires and Constructional Complexity in the Spatial Language Domain". Boas, H.C. (ed.), *Directions for Pedagogical Construction Grammar*. Berlin: De Gruyter, 217-62. <https://doi.org/10.1515/9783110746723-008>.
- Madlener-Charpentier, K.; Liste Lamas, E. (2022). "Path Under Construction: Challenges Beyond S-framed Motion Event Construal in L2 German". *Frontiers in Communication*, 7, 859714. <https://doi.org/10.3389/fcomm.2022.859714>.

- Miller, G.A.; Johnson-Laird, P.N. (1976). *Language and Perception*. Cambridge: Cambridge University Press.
- Nguyen, L. (1990). *Nhóm từ chỉ hướng vận động trong tiếng Việt* (Words Denoting Direction of Motion in Vietnamese). Hanoi: Hanoi University Library.
- Nguyen, L. (2001). *Nhóm từ chỉ hướng vận động trong tiếng Việt* (Group of Words Indicating Motion Direction in Vietnamese). Hanoi: Social Sciences Publishing House.
- Nguyen, P.H. (2019). *The Preservation of Path Verb Meanings in Prepositional Extensions in Vietnamese* [PhD dissertation]. Brisbane: University of Queensland.
- Odlin, T. (1989). *Language Transfer*. Cambridge: Cambridge University Press.
- Özçalışkan, Ş. (2015). "Ways of Crossing a Spatial Boundary in Typologically Distinct Languages". *Applied Psycholinguistics*, 36(2), 485-508. <https://doi.org/10.1017/S0142716413000325>.
- Özçalışkan, Ş.; Slobin, D. (1999). "Learning How to Search for the Frog: Expression of Manner of Motion in English, Spanish, and Turkish". Greenhill, A.; Littlefield, H.; Tano, C. (eds), *BUCLD 23 = Proceedings of the 23rd Annual Boston University Conference on Language Development* (Boston: November 1998). Somerville (MA): Cascadia Press, 541-52.
- Pace, C. (2009). "The Typology of Motion Verbs in Northern Vietnamese". *Rice Working Papers in Linguistics*, 1, 52-64.
- Paul, J. (2014). "Expressing Caused Motion Events in L2 Chinese: The Case of Learning a Language that is Typologically Similar to the Learners' L1". Ji-ang, N. (ed.), *Advances in Chinese as a Second Language*. Cambridge: Cambridge Scholars Publishing, 271-98.
- Paul, W. (2022). "SVCs in Disguise: The So-Called 'Directional Verb Compounds' in Mandarin Chinese". Simpson, A. (ed.), *New Explorations in Chinese Theoretical Syntax: Studies in Honor of Yen-Hui Audrey Li*. Amsterdam: John Benjamins, 133-62. *Linguistik Aktuell/Linguistics Today* 272. <https://doi.org/10.1075/la.272.05pau>.
- Peyraube, A. (2006). "Motion Events in Chinese: Diachronic Study of Directional Complements". Hickmann, M.; Robert, S. (eds), *Space in Languages: Linguistic Systems and Cognitive Categories*. Philadelphia: Benjamins, 121-35. <https://doi.org/10.1075/tsl.66>.
- Phan, T.; Duffield, N. (2022). "A Road Map to Vietnamese Phrase Structure". Shei, C.; Li, S. (eds), *The Routledge Handbook of Asian Linguistics*. London: Routledge, 165-185.
- Ringbom, H. (2006). *Cross-Linguistic Similarity in Foreign Language Learning*. Bristol; Blue Ridge Summit: Multilingual Matters; De Gruyter. <https://doi.org/10.21832/9781853599361>.
- Robinson, P.; Ellis, N.C. (2008). "Conclusion: Cognitive Linguistics, Second Language Acquisition and L2 Instruction – Issues for Research". Robinson, P.; Ellis, N.C. (eds), *Handbook of Cognitive Linguistics and Second Language Acquisition*. London: Routledge, 489-545. <https://doi.org/10.4324/9780203938560-28>.
- Selinker, L.; Gass, S. (1992). *Language Transfer in Language Learning*. Amsterdam; Philadelphia: John Benjamins. <https://doi.org/10.1075/la.1d.5>.
- Sharpen, R. (2016). "L1 Conceptual Transfer in the Acquisition of L2 Motion Events in Spanish and English: The Thinking-for-speaking Hypothesis". *Open Linguistics*, 2(1), 235-52. <https://doi.org/10.1515/opli-2016-0011>.
- Shen Jiakuan 沈家焯 (2003). "Xiandai Hanyu 'dong-bu jiegou' de leixingxue kaocha" 现代汉语“动补结构”的类型学考察 (Typological Study of the

- “Verb-Complement” Structure in Modern Chinese). *Shijie Hanyu jiaoxue* 世界汉语教学, 3, 17-24.
- Shi Wenlei 史文磊 (2011). “Hanyu yundong Shijian cihua leixing de lishi zhuan yi” 汉语运动事件词化类型的历时转移 (Diachronic Shifts of Lexicalization Patterns in Mandarin Motion Event Verbs). *Zhongguo Yuwen* 中国语文, 6, 483-98.
- Shi Wenlei (2012). “Hanyu yundong Shijian cihua leixing yanjiu zongguan” 汉语运动事件词化类型研究综观 (An Overview of Typological Studies on Lexicalization Types of Chinese Motion Events). *Dangdai Yuyanxue* 当代语言学, 14(1), 49-65.
- Shi Wenlei (2014). *Hanyu yundong Shijian cihua leixing de lishi kaocha* 汉语运动事件词化类型的历时考察 (A Diachronic Study of the Lexicalization Patterns of Motions Events in Chinese). Shanghai: Shangwu Yinshuguan.
- Shi Wenlei (2015). “Hanyu yundong Shijian zhi xiang biaoda de lishi yanbian ji xianguan wenti” 汉语运动事件指向表达的历时演变及相关问题 (Evolution of Deictic-of-Motion Expressions in Chinese). *Bulletin of Chinese Linguistics*, 8, 226-44. <https://doi.org/10.1163/2405478X-00802005>.
- Shi Wenlei (2019). “‘Gu-jin yan shu’ yu ‘yin yan er si’—Jiyu Hanyu yundong Shijian cihua leixing lishi yanbian de kaocha” 古今言殊与“因言而思”—基于汉语运动事件词化类型历时演变的考察 (‘Language Change’ and ‘Thinking-for-Speaking’: Based on the Diachrony of Motion Expressions in Chinese). *Changshu ligong Xueyuan xuebao* 常熟理工学院学报, 4, 21-30.
- Shi, W.; Wu, Y. (2014). “Which Way to Move: The Evolution of Motion Expressions in Chinese”. *Linguistics*, 52, 1237-92. <https://doi.org/10.1515/Ling-2014-0024>.
- Shi, W.; Yang, W.; Su, H. (2018). “The Typological Change of Motion Expressions in Chinese Revisited: Motion Events in Old Chinese and Its Modern Chinese Translation”. *Studies in Language*, 42(4), 847-85. <https://doi.org/10.1075/sL.18010.shi>.
- Shi Yuzhi 石毓智; Li Ne 李讷 (2001). *Hanyu yufahua de lichen: Xingtai jufa fazhan de dongyin hejizhi* 汉语语法化的历程—形态句法发展的动因和机制 (A History of Grammaticalization in Chinese: Motivation and Mechanisms of Evolution of Chinese Morpho-syntax). Beijing: Beijing Daxue chubanshe.
- Slobin, D. (1996). “Two Ways to Travel: Verbs of Motion in English and French”. Shibatani, M.; Thompson, S.A. (eds), *Grammatical Constructions: Their Form and Meaning*. Oxford: Clarendon Press, 195-220. <https://doi.org/10.1093/oso/9780198235392.003.0008>.
- Slobin, D. (2004). “The Many Ways to Search for a Frog: Linguistic Typology and the Expression of Motion Events”. Strömqvist, S.; Verhoven, L. (eds), *Relating Events in Narrative: Typological and Contextual Perspectives*. New York: Psychology Press, 219-57.
- Slobin, D. (2006). “What Makes Manner of Motion Salient? Explorations in Linguistic Typology, Discourse, and Cognition”. Hickmann, M.; Robert, S. (eds), *Space in Languages: Linguistic Systems and Cognitive Categories*. Amsterdam: John Benjamins, 59-81. <https://doi.org/10.1075/tsL.66.05slo>.
- Slobin, D. (2009). “Typological Differences in Syntactic Expressions of Path and Causation”. Gathercole, V.M. (ed.), *Routes to Language: Studies in Honor of Melissa Bowerman*. Mahwah (NJ): Lawrence Erlbaum, 169-94.
- Sybesma, R.P.E. (2017). “Word Order, Modern”. Sybesma, R. et al. (eds), *Encyclopedia of Chinese Language and Linguistics*. Vol. IV. Leiden: Brill, 589-591. https://doi.org/10.1163/2210-7363_ecll_com_00000458.

- Talmy, L. (1985). "Lexicalization Patterns: Semantics Structure in Lexical Forms". Shopen, T. (ed.) *Language Typology and Syntactic Description: Grammatical Categories and the Lexicon*. Cambridge: Cambridge University Press, 36-149.
- Talmy, L. (1991). "Path to Realization: A Typology of Event Conflation". *Proceedings of the Seventeenth Annual Meeting of the Berkeley Linguistics Society: General Session and Parasession on The Grammar of Event Structure*, 480-519. <https://doi.org/10.3765/bls.v17i0.1620>.
- Talmy, L. (2000). *Towards a Cognitive Semantics*. Vol. 2, *Typology and Process in Concept Structuring*. Cambridge (MA): The MIT Press. <https://doi.org/10.7551/mitpress/6848.001.0001>.
- Talmy, L. (2009). "Main Verb Properties and Equipollent Framing". Guo, J. et al. (eds), *Crosslinguistic Approaches to the Psychology of Language: Research in the Tradition of Dan Isaac Slobin*. New York: Psychology Press, 389-402.
- Tai, J.H. (2003). "Cognitive Relativism: Resultative Construction in Chinese". *Language and Linguistics*, 4, 301-16.
- Tai, J.H.; Su, S. (2013). "Encoding Motion Events in Taiwan Sign Language and Mandarin Chinese: Some Typological Implications". Cao, G. et al (eds), *Breaking Down the Barriers: Interdisciplinary Studies in Chinese Linguistics and Beyond*. Taipei; Taiwan: Institute of Linguistics, Academia Sinica, 79-98.
- van Putten, S. (2017). "Motion in Serializing Languages Revisited: The Case of Avatime". *STUF - Language Typology and Universals*, 70(2), 303-29. <https://doi.org/10.1515/stuf-2017-0016>.
- Wang Guoshuan 王国栓 (2005). *Quxiang wenti yanjiu 趋向问题研究 (Research on Issues Related to Directionality)*. Beijing: Huaxia chubanshe.
- Wu, S.-L. (2011). "Learning to Express Motion Events in an L2: The Case of Chinese Directional Complements". *Language Learning*, 61(2), 414-54. <https://doi.org/10.1111/j.1467-9922.2010.00614.x>.
- Wu, S.-L. (2014). "Influence of L1 Thinking for Speaking on Use of an L2: The Case of Path Expressions by English-Speaking Learners of Chinese". Han, Z.H. (ed.), *Studies in Second Language Acquisition of Chinese*. Clevedon: Multilingual Matters, 1-29. <https://doi.org/10.21832/9781783092093-003>.
- Wu, S.-L.; Nunome, T.; Wang, J. (2022). "Crosslinguistic Influence in the Conceptualization of Motion Events: A Synthesis Study on L2 Acquisition of Chinese Motion Expressions". *Second Language Research*, 40(2), 1-23. <https://doi.org/10.1177/02676583221132205>.
- Yang, J. (2014). *Revising Talmy's Typology of Motion Events in the Light of Chinese* [PhD Dissertation]. Edinburgh: University of Edinburgh.
- Yu, L.; Odlin, T. (2016). *New Perspectives on Transfer in Second Language Learning*. Clevedon: Multilingual Matters. <https://doi.org/10.21832/9781783094349>.
- Zeng Yonghong 曾永红 (2017). "Zhongguo Yingyu xuexizhe zhishi yundong shijian xide yanjiu" 中国英语学习者致使运动事件习得研究 (A Study on the Acquisition of Causal Motion Events by Chinese Learners of English). *Waiyu jiaoxue 外语教学*, 38(5), 60-4.
- Zlatev, J.; Yangklang, P. (2004). "A Third Way to Travel: The Place of Thai in Motion Event Typology". Strömqvist, S.; Verhoeven, L. (eds), *Relating Events in Narrative: Typological and Contextual Perspectives*. Mahwah (NJ): Lawrence Erlbaum Associates, 159-90.

Appendix: List of Stimuli Sentences

- 1 *Hoa đi chợ.*
Hoa go market
'Hoa goes/went to the market'.
- 2 *Hoa đi Hạ Long.*
Hoa go Hạ Long
'Hoa goes/went to Ha Long'.
- 3 *Hoa đi trên phố.*
Hoa go on street
'Hoa walks/walked on the street'.
- 4 *Hoa đi trong nhà.*
Hoa go in house
'Hoa walks/walked in the house'.
- 5 *Hoa đi đến chợ.*
Hoa go come.to market
'Hoa goes/went to the market'.
- 6 *Hoa đi vào chợ.*
Hoa go enter market
'Hoa goes/went into the market'.
- 7 *Hoa đi vào trong chợ.*
Hoa go enter in market
'Hoa goes/went inside the market'.
- 8 *Hoa đi vào đường một chiều.*
Hoa go enter street one way
'Hoa goes/went into a one-way street'.
- 9 *Hoa đi từ chợ.*
Hoa go from market
'Hoa goes/went from the market'.
- 10 *Hoa đi từ dưới chợ.*
Hoa go down from market
'Hoa goes/went from the market down there'.
- 11 *Hoa đi từ trong nhà.*
Hoa go from in house
'Hoa goes/went from inside the house'.
- 12 *Hoa đi tiếp đến chợ.*
Hoa go continue come.to market
'Hoa keeps/kept going and goes/went to the market ahead'.
- 13 *Hoa đi thẳng đến chợ.*
Hoa go straight come.to market
'Hoa goes/went straight to the market'.
- 14 *Hoa đi lên chợ.*
Hoa go go.up market
'Hoa goes/went to the market (up there)'.

| | | | | | | |
|----|--|-----------|-----------------|-----------------------|-----------------------|-------------|
| 15 | <i>Hoa</i> | <i>đi</i> | <i>xuống</i> | <i>công ty.</i> | | |
| | Hoa | go | go.down | company | | |
| | 'Hoa goes/went to the company (down there).' | | | | | |
| 16 | <i>Hoa</i> | <i>đi</i> | <i>lên</i> | <i>trên</i> | <i>chợ.</i> | |
| | Hoa | go | go.up | on | market | |
| | 'Hoa goes/went up to the market.' | | | | | |
| 17 | <i>Hoa</i> | <i>đi</i> | <i>xuống</i> | <i>dưới</i> | <i>công ty.</i> | |
| | Hoa | go | go.down | below | company | |
| | 'Hoa goes/went down to the company.' | | | | | |
| 18 | <i>Hoa</i> | <i>đi</i> | <i>ra</i> | <i>chợ.</i> | | |
| | Hoa | go | go.out | market | | |
| | 'Hoa goes/went to the market (out there).' | | | | | |
| 19 | <i>Hoa</i> | <i>đi</i> | <i>ra</i> | <i>khỏi</i> | <i>chợ.</i> | |
| | Hoa | go | go.out | of | market | |
| | 'Hoa goes/went out of the market.' | | | | | |
| 20 | <i>Hoa</i> | <i>đi</i> | <i>lên</i> | <i>từ</i> | <i>chợ.</i> | |
| | Hoa | go | go.up | from | market | |
| | 'Hoa goes/went up from the market.' | | | | | |
| 21 | <i>Hoa</i> | <i>đi</i> | <i>qua</i> | <i>chợ Đồng Xuân.</i> | | |
| | Hoa | go | go.through | market Dong Xuan | | |
| | 'Hoa goes/went through the Dong Xuan market.' | | | | | |
| 22 | <i>Hoa</i> | <i>đi</i> | <i>ngang</i> | <i>qua</i> | <i>chợ Đồng Xuân.</i> | |
| | Hoa | go | horizontal | go.through | market Dong Xuan | |
| | 'Hoa goes/went through the Dong Xuan market (horizontally).' | | | | | |
| 23 | <i>Hoa</i> | <i>đi</i> | <i>thẳng</i> | <i>qua</i> | <i>chợ Đồng Xuân.</i> | |
| | Hoa | go | vertical | go.through | market Dong Xuan | |
| | 'Hoa goes/went through the Dong Xuan market (vertically).' | | | | | |
| 24 | <i>Hoa</i> | <i>đi</i> | <i>mua</i> | <i>táo</i> | <i>ở</i> | <i>chợ.</i> |
| | Hoa | go | buy | apple | in | market |
| | 'Hoa goes/went to buy apples at the market.' | | | | | |
| 25 | <i>Hoa</i> | <i>đi</i> | <i>về</i> | <i>nhà</i> | <i>từ</i> | <i>chợ.</i> |
| | Hoa | go | return | home | from | market |
| | 'Hoa goes/went home from the market.' | | | | | |
| 26 | <i>Hoa</i> | <i>đi</i> | <i>xe máy</i> | <i>vào</i> | <i>chợ.</i> | |
| | Hoa | go | motorbike | enter | market | |
| | 'Hoa goes/went to the market by motorbike.' | | | | | |
| 27 | <i>Hoa</i> | <i>đi</i> | <i>cáp treo</i> | <i>lên</i> | <i>núi Yên Tử.</i> | |
| | Hoa | go | cable | go.up | mountain Yen Tu | |
| | 'Hoa goes/went to Yen Tu mountain by cable car.' | | | | | |
| 28 | <i>Hoa</i> | <i>đi</i> | <i>chợ</i> | <i>để</i> | <i>mua</i> | <i>cam.</i> |
| | Hoa | go | market | in order to | buy | orange |
| | 'Hoa goes/went to the market in order to buy oranges.' | | | | | |

- 29 *Hoa đi chợ với Lan.*
 Hoa go market with Lan
 ‘Hoa goes/went to the market with Lan’.
- 30 *Hoa đi chợ bằng xe máy với Lan.*
 Hoa go market by motobike with Lan
 ‘Hoa goes/went to the market by motorbike with Lan’.
- 31 *Hoa đi làm bằng xe máy vì.*
chị ấy ô tô bị hỏng
 Hoa go work by motorbike because
 her car get broken
 ‘Hoa goes/went to work by motorbike because her car broke down’.
- 32 *Hoa đi xe buýt cho tiện.*
 Hoa go bus for convenience.
 ‘Hoa goes/went by bus for convenience’.
- 33 *Hoa đi xem phim cho vui.*
 Hoa go watch movie for fun
 ‘Hoa goes/went to watch movies for fun’.