The Acquisition and Use of Motion Event Expressions in Chinese

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The Acquisition and Use of Motion Event Expressions in Chinese

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TABLE OF CONTENTS

Chapter 1 Introduction................................................................. 1
  1.1 Talmy’s (1985, 1991, 2000) linguistic typology of motion events........... 1
  1.2 Slobin’s (1996b) “thinking for speaking” hypothesis............................... 7
  1.3 Outlining the problems ........................................................................ 10
  1.4 Overview of the dissertation .................................................................. 12

Chapter 2 Formal Encoding of Motion Events in Chinese.............................. 13
  2.0 Introduction...................................................................................... 13
  2.1 The linguistic encoding of figure and ground ....................................... 14
  2.2 The linguistic encoding of motion ........................................................ 18
  2.3 The linguistic encoding of path ............................................................ 19
    2.3.1 Spatial prepositions in Chinese ...................................................... 21
    2.3.2 Path verbs in Chinese .................................................................. 22
      2.3.2.1 Deictic path verbs in Chinese .................................................. 23
      2.3.2.2 The so-called directional complement verbs .............................. 23
      2.3.2.3 General path verbs ................................................................. 24
    2.4 The linguistic encoding of manner ..................................................... 25
      2.4.1 Manner-of-motion verbs .............................................................. 25
      2.4.2 Manner adverbials ...................................................................... 28
    2.5 The linguistic encoding of cause of motion ........................................ 29
    2.6 The verb patterns of expressions of motion in Chinese ......................... 31
    2.7 The place of Chinese in motion event typology ..................................... 36
    2.8 Summary ......................................................................................... 40

Chapter 3 Motion Events in Chinese Frog Stories .......................................... 41
  3.0 Introduction...................................................................................... 41
  3.1 The frog story method ....................................................................... 45
  3.2 Sample and procedures ....................................................................... 46
  3.3 Results .............................................................................................. 52
    3.3.1 Uses of motion verbs: ................................................................. 52
    3.3.2 Descriptions of ground elements in individual clauses ..................... 56
    3.3.3 Descriptions of narrative segments of the deer scene ....................... 58
    3.3.4 Static settings versus dynamic movement ....................................... 60
  3.4 General discussions ............................................................................ 61
    3.4.1 The use of motion verbs .............................................................. 61
    3.4.2 Descriptions of ground elements per individual clauses ................. 65
    3.4.3 Descriptions of narrative segments of a complex motion event .......... 69
    3.4.4 Dynamic movement versus static setting ...................................... 72
  3.5 Summary and conclusions ................................................................. 74
List of Tables

Table 1 *The entire collection of motion verbs in Chinese frog stories* ................................. 54

Table 2 *Distribution of verb patterns in Chinese frog stories* .............................................. 55

Table 3 *Distribution of plus-ground clauses by the type of ground elements* ................. 57

Table 4 *Number of event segments mentioned by each adult Chinese narrator of the deer scene* ........................................................................................................... 58

Table 5 *The entire collection of motion verbs in English and Spanish frog stories* ........ 63

Table 6. *Structural and discourse patterns of motion event descriptions in English, Spanish, & Chinese* ........................................................................................................... 75

Table 7 *Percentage of minus-ground and plus-ground clauses in novels* ......................... 85

Table 8 *Percentages of motion events with ground references in Chinese novels* .......... 85

Table 9 *Frequency distribution of alternative manner expressions in novels* ................. 89

Table 10 *The use of motion verbs in Chinese frog stories by age* ..................................... 102
List of Figures

Figure 1. *Frequency distribution of manner, path, and neutral expressions in Chinese frog stories* ....................................................................................................................................... 56

Figure 2. *Percentage distribution of manner vs. path expressions in Chinese frog stories* ........................................................................................................................................... 102

Figure 3. *The early development of a predominance of manner expressions over path expressions in Chinese children* ........................................................................................................ 104

Figure 4. *Percentages of plus-ground clauses in Chinese frog stories by age* ........... 105

Figure 5. *Percentage of narrators mentioning 3 or more segments of the deer scene by age* ........................................................................................................................................... 105

Figure 6. *Mean number of segments mentioned for the deer scene in Chinese by age group* ........................................................................................................................................... 106

Figure 7. *Percentage of Chinese narrators providing descriptions of setting in the deer scene* ........................................................................................................................................... 107

Figure 8. *The development of plus-ground clauses in English, Spanish, and Chinese* ... 109

Figure 9. *The percentage of motion events descriptions involving a deictic path verb in Chinese frog stories by age* ........................................................................................................ 110

Figure 10. *The percentage of goal-marking clauses in Chinese frog stories by age* ...... 113
## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA</td>
<td>fronted object marker <em>bà</em></td>
</tr>
<tr>
<td>CL</td>
<td>classifier</td>
</tr>
<tr>
<td>DE</td>
<td>nominalizer <em>de</em></td>
</tr>
<tr>
<td>LE</td>
<td>perfective aspect marker <em>le</em></td>
</tr>
<tr>
<td>ZHE</td>
<td>durative aspect marker <em>zhe</em></td>
</tr>
</tbody>
</table>
CHAPTER 1 INTRODUCTION

This dissertation investigates the acquisition and use of verbal descriptions of dynamic motion events in discourse by speakers of Chinese\(^1\). The research design involves analyses of data from native speaker retrospection, picture-elicited oral narratives and creative fictional written narratives. The main objective is to achieve a better understanding of the influences of language-specific properties on the patterns of language acquisition and use.

This first chapter serves several purposes. First, in Section 1.1, the basic theoretical framework, i.e., Talmy’s (1985, 1991, 2000) linguistic typology of motion events, is introduced. Second, in Section 1.2, Slobin’s (1996a, 1997a, 2004) research on consequences of Talmy’s linguistic typology for language acquisition and use is reviewed. Third, Section 1.3 outlines the problems to be dealt with in the dissertation. Finally, Section 1.4 lays out the structure of the dissertation.

1.1 Talmy’s (1985, 1991, 2000) linguistic typology of motion events

Motion events, defined here as events in which an entity moves from one place to another, are one of the earliest, most basic and most pervasive experiences in our lives (Johnson, 1987). We move around the world every day, and from birth forward we experience seeing people in one place at one time and at another place at another time. Or sometimes an object or person may be stationary relative to the background while our viewing perspective changes. Also, one of the first things children enjoy doing is talking about objects and their motions through space (Landau & Zukowski, 2003).

---

\(^1\) Throughout the dissertation, Chinese refers to Mandarin Chinese.
According to Talmy, a motion event consists of four basic semantic components, namely, *motion, figure, ground, path*.

(1) The basic semantic components of a motion event

- **Motion**: the fact that some entity changes its location
- **Figure**: the entity that moves
- **Ground**: the entity with respect to which the figure moves
- **Path**: the course followed by the figure with respect to the ground

These basic semantic components can be identified in the following English sentence:

(2) The man came into the house.

[figure] [motion] [path] [ground]

A motion event may also include two external components, *manner* or *cause*.

(3) The external semantic components of a motion event

- **Manner**: the way in which the figure moves
- **Cause**: the cause due to which the figure moves

Similarly, these external components can be identified in the English sentences in (4).

---

2 As Talmy (2000, p. 26) points out, the motion component refers specifically to the occurrence of translational motion that “does not refer to all the types of motion that a Figure could exhibit, in particular excluding ‘self-contained motion’ like rotation, oscillation, or dilation.”

3 Manner is poorly defined in the literature. Slobin (2004, p. 223) refers to manner as “a set of dimensions that modulate motion, including motor pattern, rate, rhythm, posture, affect, and evaluative factors.”
(4)  
  a. The man **ran** into the house.  
     [motion+manner]
  b. The man **pushed** the table into the cave.  
     [motion+cause]

In (4a), the manner component is conflated with the motion component, and the verb *run* specifies that the manner of movement, namely, *swiftly on foot*. In (4b), the cause component is conflated with the motion component, and the verb *push* specifies the cause of the movement of the table, which is the figure object.

Among the six components of a motion event, path is generally regarded as the central element, and languages differ significantly with respect to the lexical elements that are characteristically used to encode information about path of movement. Specifically, the path component can either be encoded in the verb, or in a satellite to the verb. In English, the path component and the motion component can be conflated within the verb, as shown in (5a) or the path component can be encoded in a satellite element other than the verb such as a particle as in (5b).

(5)  
  a. The man **entered** the house.  
     [path+motion]
  b. The man ran **into** the house.  
     [path]

---

4 According to Talmy (2000, p. 28), the verb “push” refers to what the agent, i.e., “the man,” does on the moving figure “the table.” So it gives the cause. By contrast, “run” refers to what the moving figure “the man” does, and therefore it is manner that is conflated in the verb.
While languages across the world have access to both means of mapping the meaning component of path onto surface forms, each language typically has one or the other as the characteristic pattern of lexicalizing path information. Talmy (1985, 2000) has proposed a two-way typology differentiating satellite-framed languages from verb-framed languages on the basis of the characteristic pattern of encoding the information about the path of movement\textsuperscript{5, 6}.

(6) A partial list of verb-framed versus satellite-framed languages (Talmy, 2000)

<table>
<thead>
<tr>
<th>Verb-framed languages</th>
<th>Satellite-framed languages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Romance</td>
<td>Germanic</td>
</tr>
<tr>
<td>Semitic</td>
<td>Slavic</td>
</tr>
<tr>
<td>Turkic</td>
<td>Celtic</td>
</tr>
<tr>
<td>Bantu</td>
<td>Finno-Ugric</td>
</tr>
<tr>
<td>Japanese</td>
<td>Warlpiri</td>
</tr>
<tr>
<td>Tamil</td>
<td></td>
</tr>
</tbody>
</table>

Satellite-framed languages (e.g., English) characteristically encode the core information of path of movement in the subordinate satellite element associated with a

\textsuperscript{5} Talmy’s typological framework is not limited to motion events, but applies to event complexes in general. He proposed that the languages of the world exhibit one of two patterns (verb-framed versus satellite-framed) “on the basis of where they characteristically express the schematic core of the event complex – in the verb or in the satellite to the verb” (Talmy, 2000, p. 213). In addition to motion events, the typological framework also embraces a broader range of conceptual domains including the conceptual domain of aspect, change of state, action correlation, and event realization.

\textsuperscript{6} By \textit{characteristic}, Talmy (2000, p. 27) means three things: (1) it is \textit{colloquial} in style, rather than literary, stilted, and so on; (2) it is \textit{frequent} in occurrence in speech, rather than only occasional; (3) it is \textit{pervasive}, rather than limited—that is, a wide range of semantic notions are expressed in this type. Therefore, even though English does allow for the encoding of core information of a motion event by means of verbs like \textit{enter} and \textit{ascend}, the \textit{characteristic} or dominant pattern in English is the encoding of Path by means other than a verb.
verb such as a particle (in, out, across), whereas verb-framed languages (e.g., Spanish) characteristically encode the path in the main verb in a clause (e.g., equivalents of enter, exit, ascend, descend, etc.). This contrast can be best illustrated by example (7) from Slobin (1997a, p. 438, his example (1)).

(7) English Original

I ran out the kitchen door,
past the animal pens,
towards Jasón’s house.

Spanish translation

Sali por la puerta de la cocina
pasé por los corrales
y me dirigí a casa de Jasón

“I exited [by] the kitchen door”
“passed by the animal pens”
“and directed myself to Jasón’s house”

As shown in (7), while English employs a set of locative particles and prepositions (out, past, towards) to encode each type of change in location, Spanish typically makes use of a set of separate verbs (salí, pasé, me dirigí) instead.

It is useful to point out that a language provides its speakers with many different ways to express the same sequence of motion events. For example, an English speaker can say “I ran out through the kitchen door, went past the animal pens, and set out for Jason’s house,” which is perfectly idiomatic English, to describe the sequence of movements described in (7). And it is also possible to leave out the manner expression in English. One can simply say “He came into the house” or “He came in,” and simply not mention that he did so on the run. It is not necessary to say that he did it by walking, crawling, loping, hopping, or after having been shot, or anything of that nature. Nevertheless, in all these cases, the characteristic pattern of encoding the path information in the satellites is unchanged.

English also has a number of verbs that encode information about path and that can be used as main verbs (rise, leave, near, follow, enter, exit, ascend, descend, cross, pass, circle, advance, proceed, approach, arrive, depart, return, join, separate, part, etc.). But most of such verbs are borrowed from French or other Romance languages and they are not the typical means of expressing motion events in English. Similarly, manner verbs in Spanish can also be used as the main verbs to express motion events (El hombre corrió hacia la casa “The man ran toward the house.”). But, again this is not the typical or preferred way of expressing motion events in Spanish.
Satellite-framed languages and verb-framed languages also differ in their preferences for encoding manner of movement. Satellite-framed languages typically encode manner of movement in the verb, whereas verb-framed languages typically use subordinate elements to describe the manner. Therefore, to describe a scene in which a man ran as he entered a house, an English speaker would most likely say (8b) rather than (8a) even though both are possible for this satellite-framed language.

(8) a. The man came into the room, running.
    b. The man ran into the room.

In contrast, a speaker of Spanish, a verb-framed language, will most likely say (9a), or (9b) completely leaving out information about manner of movement, or (9c).

(9) a. El hombre entró a las casa corriendo.
    the man entered to/in the house running
    “The man ran into the house.”
    b. El hombre entró a las casa.
    the man entered to/in the house
    “The man entered the house.”
    c. El hombre entró.
    the man entered
    “The man moved in.”
In the Spanish sentence in (9a), the main verb, *entró*, indicates that motion has occurred in a particular direction, with no indication of manner. Instead, the “supporting information” about manner of movement is conveyed by the gerundive *corriendo* “running.” As Talmy (1985, 2000) points out, the gerundive or adverbial type of constituent can be “stylistically awkward,” so that information about manner or cause of movement is “often either established in the surrounding discourse or omitted altogether” (Talmy, 1985, p. 69).

### 1.2 Slobin’s (1996b) “thinking for speaking” hypothesis

Studies of narrative discourse have revealed certain implications of the distinction between verb-framed languages and satellite-framed languages for the organization of texts consisting of connected discourse. Whereas Talmy was mainly interested in the distributional pattern on a sentence level, such typological linguistic differences have also been shown to impact the structure of an entire narrative (Hendriks, 1993; Hickman, 2003; Ibarretxe-Antuñano, 2004). They have an influence on rhetorical styles (Slobin, 1996a, 1997a) and habitual patterns of language use (Slobin, 2004). In written texts as well as orally elicited narratives, “the form and content of descriptions of journeys are heavily shaped by the typology of lexicalization patterns” (Slobin, 1996a, p. 195). Several contrasts have been observed. First, speakers of satellite-framed languages consistently show both more frequency of mention and greater lexical diversity with regard to the manner component of motion events, as compared to speakers of verb-framed languages. Second, speakers of satellite-framed languages (e.g., English)

---

8 This is presumably because manner of movement is “routinely expressed in a syntactically obligatory component,” i.e., the main verb in these languages (Slobin, 2000, p. 110).
typically make more frequent and elaborated ground descriptions than verb-framed languages (e.g., Spanish). Third, speakers of satellite-framed languages tend to break up a scene into several components and use separate action clauses to describe segment by segment what takes place in this event. Speakers of verb-framed languages tend not to do so. Finally, speakers of satellite-framed languages tend to devote more narrative attention to the dynamics of movement. By contrast, speakers of verb-framed languages tend to focus more on the static description of the physical setting in which the action takes place.

To account for the systematic differences in patterns of language use (e.g., narration of motion events in stories) by speakers of typologically different languages, Slobin (1996b) proposes what he calls “thinking for speaking hypothesis.” The thinking for speaking hypothesis claims that there is a special kind of thinking that is carried out on-line in the process of speaking, or signing, or writing, or listening9. Thinking for speaking involves picking those characteristics of objects and events that (a) fit some conceptualization of the event, and (b) are readily encodable in the language. The reason that speakers of satellite-framed languages tend to devote more narrative attention to the dynamics of movement is presumably the “availability of verbs of motion (often conflated with manner) that can readily be associated with satellites and locative prepositional phrases to trace out detailed paths in relation to ground elements” (p. 205). Similarly, the heightened sensitivity to manner observed in speakers of satellite-framed languages is due to the fact that in these languages manner is expressed in the main verb, which is an essential part of the sentence, and as a result, manner is “readily included in

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9 In recent years, the thinking for speaking hypothesis has been shown to be valid for a whole set of other cognitive processes, such as translation, mental imagery, etc. (see e.g., Oh, 2003; Slobin, 2003).
sentences,” and more frequently expressed in satellite-framed languages than in verb-framed languages. This may lead speakers of satellite-framed languages to form a habit of paying more attention to manner when they encode events for the purpose of verbalizing them. By contrast, speakers of verb-framed languages are led by their native language to ignore manner except for special occasions (e.g., when attention to manner is salient or foregrounded).

Children of individual languages, of course, must learn such patterns of language structure and language use. According to Slobin (1996a), when acquiring a native language, a child learns particular ways of thinking for speaking. With respect to motion events, the typological characteristics of each input language trains its speakers from childhood to pay attention to different details of such events when talking about them. Consequently, children come to structure discourse about motion events in terms of the typological characteristics of the input language. The patterns of language structure lead not only to the development of a range of syntactic devices, but also to a sort of “thinking for speaking” that is characteristic of the input language (Slobin, 1996b). In other words, children acquiring typologically different languages are guided by the set of grammatical distinctions in the input languages to attend to distinct features of events while speaking.

Slobin (2001) points out that “children come to formulate experience for linguistic expression in quite different ways, depending on the type of language they are learning” (p. 442). They start to learn the lexical, grammatical, and discourse characteristics of the native ways of expressing motion from an early age. Choi and Bowerman (1991), for example, have found that children learning English and Korean show language-specific patterns in the way they talk about motion from as early as 17-20
months. Crosslinguistic studies reported in Berman and Slobin (1994) show that by age 3 children speaking a satellite-framed language express manner more often than children speaking a verb-framed language, and children learning satellite-framed languages provide elaborate path descriptions in the preschool years, using combinations of satellites and prepositional phrases. By school age, children have acquired typologically distinct ways of describing events and constructing connected texts.

1.3 Outlining the problems

Talmy's (1985, 1991, 2000) binary typology is based on the way in which different languages across the world preferentially express path (i.e., change of location) in verbs or in elements associated with verbs. This is obvious for languages such as English and Spanish where distinct lexical categories or morphological markings are present to differentiate the main verb from its supporting elements. In these languages, there is only one verb slot in a clause. In satellite-framed languages (e.g., English and German), the verb slot is typically occupied by a manner-of-motion verb (run). In verb-framed languages (e.g., Spanish and French), the verb slot is typically occupied by a path verb (exit) and a manner verb is used as the main verb only if the clause does not assert a change of state (Slobin & Hoiting, 1994). Consequently, in these languages, it is relatively easy to figure out which is the main lexical element, and which is the supporting element.

Chinese makes use of a quite different strategy, where manner is typically expressed in the first verb and path is expressed in the second verb in a serial verb construction (V1 + V2) as in zǒu-jìn jiàoshì “walk-enter classroom.” So Chinese allows
for at least two verb slots in a single clause: one for the path verb, and the other for the manner verb. It is not always clear which verb is the main verb. Consider the examples in (10).

(10)  

(a) *La botella salió de la cueva flotando.*  
the bottle exited from the cave floating  
“The bottle floated out of the cave.”

(b) *Pingzi piāo-chū-le dòngxuè.*  
bottle float-exit-LE cave  
“The bottle floated out of the cave.”

Talmy (1985, 2000) claims that Chinese is a satellite-framed language, as he believes that the specification of manner lies in the verb root, and the path information is encoded in another verb which functions as a complement to the manner verb. This classification, however, has recently been challenged by Slobin and Hoiting (1994), Tai (2003), Chu (2004), and Slobin (2004). Tai (2003) argues that Chinese is primarily a verb-framed language, based on evidence that the path verb is the main verb, rather than the manner verb. Slobin (2004) revised Talmy’s binary typology, adding a third type. According to him, in addition to the original types of verb-framed and satellite-framed languages, there are other languages (e.g., Chinese) that may be best characterized as equipollently-framed, for which the specifications of path and manner information are achieved by equivalent grammatical forms.
Assuming the narrative consequence of linguistic typology and given the conflicting claims about the place of Chinese in motion event typology, two important empirical questions arise: (i) do native speakers of Chinese construct motion event descriptions in a way that generally shows it to be a satellite-framed language, or an equipollently-framed language, or a verb-framed language? (ii) do the features that children acquire first in Chinese resemble those of a satellite-framed language, or a verb-framed language, or an equipollently-framed language?

1.4 Overview of the dissertation

Chapter 2 provides a detailed description of the linguistic resources for the formal encoding of motion events in Chinese, and discusses the place of Chinese in motion event typology. Chapter 3 examines the habitual patterns of motion event descriptions in spoken narratives elicited from Chinese speakers using the wordless picture storybook *Frog, where are you?* (Mayer, 1969). Chapter 4 examines how fictional writers talk about motion events through an analysis of motion event descriptions in nine contemporary Chinese novels. Building on the results from Chapter 3 and Chapter 4, Chapter 5 investigates the development of motion event descriptions by Chinese children through an examination of the spoken narratives produced by children from different age groups (3, 4, 5, and 9) in comparison with adult narratives. Finally, Chapter 6 summarizes the results and points to directions for future research.
CHAPTER 2  FORMAL ENCODING OF MOTION EVENTS IN CHINESE

2.0  Introduction

Motion events – defined here as events in which an entity moves from one place to another – contain four basic semantic components (i.e., figure, motion, path, and ground), as well as two external semantic components (i.e., manner, and cause).

(11)  a.  The man ran into the house.
     [figure] [manner + motion] [path] [ground]
     
     b.  The man pushed the table into the house.
     [cause + motion] [figure] [path] [ground]

Languages across the world all have the necessary means of encoding these meaning components, and in fact each individual language has many different ways of expressing motion events. As Slobin (2004, p. 220) points out, “a language provides its speakers with a range of ways of describing motion events – combinations of lexical items and grammatical morphemes in various construction types.” This chapter provides an introduction to the linguistic devices available to speakers of Chinese to encode the semantic components of motion events, namely, figure, motion, path, ground, manner, and cause. Special attention will be paid to how the Chinese language differs from a satellite-framed language like English and a verb-framed language such as Spanish in which lexical categories or syntactic/morphological structures may be typically used to encode the semantic components of path and manner. Some preliminary conclusions regarding the place of Chinese in motion event typology will be offered as well.
2.1 The linguistic encoding of figure and ground

The description of a motion event requires linguistic representation of the object that moves, the *figure*, and the object with respect to which the figure moves, the *ground*. In Chinese, as in most of the world languages, figure and ground are encoded in linguistic elements of the same grammatical category: nominal phrases. The syntactic positions for the linguistic representation of the figure in spontaneous motion events are different from those in caused motion events. In spontaneous (or self-directed) motion, the figure entity initiates its own movement resulting in a change of location, and as such it is typically encoded in Chinese as the subject of the sentence as in (12)\(^{10}\). In this case, the subject can be either in preverbal position as in (12a), or in postverbal position as in (12b).

\[
(12) \quad \text{Figure in spontaneous motion} \\
\begin{align*}
\text{a. } & \text{Qīngwā jiù cōng bōlípíng lǐ pāo-chū-lái.} \quad \text{[adult12.cha]} \\
& \text{frog then from bottle inside run-exit-come} \\
& \text{“Then the frog ran out of the bottle (toward the speaker).”} \\
\text{b. } & \text{Cóng nà dòng lǐbīăn pāo-chū-lái yī-zhī māotóuyīng.} \quad \text{[adult12.cha]} \\
& \text{from that hole inside run-exit-come one-CL owl} \\
& \text{“From inside the bottle ran out an owl (toward the speaker).”}
\end{align*}
\]

In caused motion, some agentive entity causes the figure entity to move from one place to another. In Chinese caused motion, the figure can be encoded either as the direct object of a verb sequence (13a) or as the demoted object in the *bā* construction (13b).

\[ \text{10 The concept of } \textit{subject} \text{ in Chinese involves a lot of complexities that are beyond the scope of this dissertation. We follow the intuitive, pre-theoretical notion of subject as the noun phrase bearing certain “being” or “doing” relationship with the verbal element in a sentence (cf. Li & Thomposn, 1989, p. 87).} \]
Figure in caused motion

a.  
Tāmēn dài-zòu-le  tāmēn-de qīngwā.  
they  carry-walk-LE  they-DE  frog

“They took their frog away.”

b.  
Tā bā zhè xiǎo-hái  gěi  rēng-dào  hé  lǐbiān le.  
he  BA  this  little-child  give  throw-arrive  river  inside  LE

“It (the deer) threw the boy into the river.”

In example (13a), the moving entity, i.e., the figure, is linguistically represented by the noun phrase tāmēn-de qīngwā “their frog,” which occupies the direct object position of the sentence. In example (13b), the noun phrase zhè xiǎo-hái “this boy” representing the figure is originally the direct object of the verb rēng “throw,” but now follows the fronted object marker bā. The sentence structure in the form of subject + bā direct object + verb is called the bā construction in the grammar of Chinese.\textsuperscript{11}

The syntactic positions for the linguistic elements that represent the ground are versatile in Chinese. The ground can be encoded either as the object of a verb or verb sequence (14a), as the object of a preposition\textsuperscript{12} (14b), or as the modifier of the subject (14c).

\textsuperscript{11} The bā construction is a hot topic in the grammar of Chinese. The reader is referred to Li & Thompson (1989, pp. 463-491) for some of the issues related to this construction.

\textsuperscript{12} Prepositions in Chinese are called “coverbs” that function as prepositions, “because most of them used to be verbs at earlier stages of the language, and many of them still have characteristics of verbs and can be used as verbs that have similar meanings” (Li & Thompson, 1989, p. 360). For ease of presentation, the term preposition will be used throughout this dissertation.
(14) a. Ground as direct object

Yùshì tā jiù pá-dào nà-gè shù-shàng qù. [adult11.cha]

so he then climb-arrive that-CL tree-above go

“So he climbed up onto the tree (away from the speaker).”

b. Ground as the object of a preposition

Qīngwā jiù cóng bōlǐpíng lǐ pāo-chū-lái. [adult12.cha]

frog then from bottle in run-exit-come

“Then the frog ran out of the bottle (toward the speaker).”

c. Ground as the specifier of the subject

Píngzǐ lǐ de qīngwā pāo-chū-qù-le. [5yrs12.cha]

bottle in DE frog run-exit-go-LE

“The frog in the bottle ran out (away from the speaker).”

Ground does not always need to be encoded explicitly. Rather, it can sometimes be left to inference from the context or world knowledge. Or the speaker can be interpreted as the reference object via the use of the two deictic verbs lái “come” or qù “go.” In example (15), the ground is not explicitly specified. Rather, the goal (or destination) of the frog’s movement can be roughly identified as some place away from the speaker. The source (or origin) of the frog’s movement, i.e., píngzǐ “bottle” can only be inferred from the discourse context provided by example (16), which immediately follows example (15) in a story about a boy and a dog going out to search for a runaway pet frog.
In some motion events, there can be several ground elements. These ground elements specify the source, goal, milestone, or medium of movement. They serve as reference points with respect to which the figure moves. As such, they are typically integral components of the path, marking the origin, the end-point, the middle ground, or a salient feature along a path. These different ground elements can all be illustrated by the English example in (17) from Slobin (1997a, p. 439).

(17) He went from the station[source], along the avenue[medium] and through the crowds[medium], past the monument[milestone], to his office[goal].

The five noun phrases in example (17), namely, the station, the avenue, the crowds, the monument, and his office, represent different ground objects. They are attached to a single verb went along with the five spatial prepositions. All these elements work together to trace out the trajectories of movement.
Similarly, several ground objects can sometimes be mentioned within a single clause in Chinese. The example in (18) may serve to illustrate this point\(^\text{13}\).

\[(18)\] \text{Mìfēng cōng fēngcháo lǐ xiàng wài fēi-chū.} \quad [\text{adult05.cha}]

bee from beehive in toward outside fly-exit

“Bees flew out from the beehive.”

Here in example (18), the prepositional phrase \text{cōng fēngcháo} “from the beehive” specifies the source of the movement, whereas the prepositional phrase \text{xiàng wài} “toward outside” specifies the goal of the movement. Together, they further elaborate on the details of the path of the movement.

2.2 \textbf{The linguistic encoding of motion}

Languages across the world typically encode the motion that an object undergoes in the verb. An obvious example would be the simple motion represented by the English verb “move.” We have seen that the linguistic encoding of figure and ground often involve a one-to-one correspondence between the two meaning components and the linguistic forms of their surface representations. When it comes to components such as \textit{motion, path, manner, and cause}, such one-to-one mappings of forms onto meaning is not always available. Specifically, \textit{motion} can be encoded together with \textit{path or manner} or \textit{cause} or sometimes both \textit{path and manner} in the same lexical item. Therefore, relevant

\(^{13}\) As we will see from our analyses of written and spoken narratives in Chinese in Chapter 3, this option is rarely taken by speakers of Chinese in language use.
aspects of motion will be examined along with the linguistic encoding of path, manner, and cause.

2.3 The linguistic encoding of path

Paths play a major role in the linguistic encoding of motion events (Jackendoff, 1983). In Talmy’s (2000) framework of motion events, path is considered as the defining property of a motion event. A sentence containing a verb of motion that encodes the motion that an object undergoes cannot be said to express a motion event, if information about path of movement is not specified. This is illustrated by a pair of English examples.

(19) a. John drove a BMW into the rice field last week.
    b. John drove a BMW in the rice field last week.

Rohde (2001) shows that while (19a) is unambiguously a description of a caused motion event, English speakers tend to assign sentences such as (19b) an interpretation that sees the figure as moving in a static location, and not as a dynamic motion event that involve a change of location. The difference in interpretation is of course due to the presence/absence of “the expression of a dynamic PATH” (Rohde, 2001, p. 59). We can make a similar observation in Chinese (see e.g., Chu, 2004).

(20) a. Hěnduō qīngwā tiào-jín-le píngzi lǐ.
    many frog jump-enter-LE bottle inside
    “Many frogs jumped into the bottle.”
b.  

Hěnduō qīngwā zài píngzi lǐ tiào-zhe.

many  frog  at  bottle  inside  jump-ZHE

“Many frogs are jumping inside the bottle.”

The verb jìn “enter” in (20a) is a verb of inherent direction. It specifies path with respect to the ground, i.e., it specifies that the figure object hěnduō qīngwā “many frogs” ended up inside the ground object píngzi “bottle” as a result of the jumping event. By contrast, there is not any such expression in (20b) to express any change of location. The preverbal locative phrase zài píngzi lǐ “inside the bottle” in (20b) only signals the location where the action takes place. According to Chu (2004), what the sentence in (20b) actually reports is that some entities do something at some place on a par with (21). The events represented in (20b) and (21) are general actions rather than dynamic motion events.

(21)  

Hěnduō xuéshēng zài lǐtáng lǐ chànggē.

many  student  at  auditorium  inside  sing

“Many students are singing in the auditorium.”

In Chinese, path can be encoded in either a preposition, or a verb, or a combination of the two. Consider the example in (22).

(22)  

Xiǎonánhái xià-de cóng shù-zhī shàng diào-le-xià-lái. [adult05.cha]

boy  scare-DE  from  tree-branch  above  fall-LE-descend-come

“The boy was so scared that he fell down from the branches of a tree.”
In (22), the preposition 从 “from” provides us with the information about the source of the movement, the verbs 落 “fall” and 降 “descend” about the direction of movement, and the verb 来 “come” provides information about the anchorage perspective (i.e., toward the speaker).

2.3.1 Spatial prepositions in Chinese

Prepositions and particles are the most important elements in the encoding of path in English. These path expressions can be divided into three broad types encoding different kinds of spatial relationships (Jackendoff, 1983): (a) TO paths, (b) FROM paths, and (c) VIA paths. Landau and Zukowski (2003) provide the following examples to illustrate the three types of path that are distinguished in English by the sets of spatial prepositions that encode them.

(23)  

a. TO paths: to, in(to), on(to), towards  

b. FROM paths: from, out, off, away  

c. VIA paths: past, over, around, through

Chinese has a very limited number of prepositions that can be used to encode information about path of movement. In addition, these prepositions, unlike English spatial prepositions, do not readily accumulate in connection with a motion verb. An illustrative list of such prepositions (see, e.g., Li & Thompson, 1989; Chu, 2004) are provided in (24), where I have classified them into three broad types.
These prepositions can each combine with a nominal complement to form directional adjuncts, which can in turn be used to elaborate path, as we have seen in our discussion of example (22).

2.3.2 Path verbs in Chinese

When a verb encodes both motion and the path along which the figure object travels, it is a path verb. They are verbs that include a specification of path in their meanings. Verb-framed languages such as Spanish often have a large set of surface verbs that express both motion and path of movement at the same time. Chinese also typically employs verbs to encode movement along various paths, and thus incorporating path and motion in verbs. Most of these path verbs can either function alone in a single clause, or participate in a serial verb construction, i.e., a verb sequence without any maker indicating the relationship between them. When they occupy a verb slot other than the first in a serial verb construction, they are considered as complements (e.g., Li & Thompson, 1989) or satellites (Talmy, 2000) to the first verb.

In this dissertation, the path verbs in Chinese are divided into three types depending mainly on where they appear in a verb sequence: (a) deictic path verbs, (b) the
so-called directional complement verbs, and (c) other non-deictic path verbs which for
want of a better term I simply call *general path verbs*.\textsuperscript{14}

2.3.2.1 Deictic path verbs in Chinese

Let us start with the ones that usually occur in the final position of a verb
sequence. They include the two deictic path verbs *lái* “come” and *qù* “go.”

The two verbs *lái* “come” and *qù* “go” indicate deictic spatial direction.
Specifically, they indicate whether the figure is moving toward or away from the speaker.
They are used productively in expressions of motion events in Chinese. They can be used
alone. Or they can occur in a sequence with other (non-deictic) path verbs, or manner
verbs (of motion or of general action), or with a combination of manner verb and non-
deictic path verbs. In each case, they can be said to occur in the final position of a verb
sequence. According to Li and Thompson (1989, p. 412), “*lái* and *qù* can be used only
when reaching a destination is implied.”

2.3.2.2 The so-called directional complement verbs

Chinese contains a considerable number of (non-deictic) path verbs of inherent
direction, which are traditionally considered as directional complement verbs in the
literature (e.g., Li & Thompson, 1989). It is also for this reason that Talmy (1985, 2000)
treats path verbs in Chinese as satellite elements, and considers Chinese as a satellite-
framed language. The so-called directional complement verbs are listed in (25) with the
independent meaning in quotes and the directional meaning in capitals.

\textsuperscript{14} The discussion of path verbs here is not intended to be exhaustive. Our purpose is to illustrate the
diversity of path verbs in Chinese.
The so-called (non-deictic) directional complement verbs in Chinese

<table>
<thead>
<tr>
<th>Verb</th>
<th>Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>chū</td>
<td>OUT</td>
</tr>
<tr>
<td>jìn</td>
<td>IN</td>
</tr>
<tr>
<td>dào</td>
<td>UP-TO</td>
</tr>
<tr>
<td>guò</td>
<td>PAST</td>
</tr>
<tr>
<td>huí</td>
<td>BACK</td>
</tr>
<tr>
<td>kāi</td>
<td>AWAY</td>
</tr>
<tr>
<td>qǐ</td>
<td>UP</td>
</tr>
<tr>
<td>shàng</td>
<td>UP</td>
</tr>
<tr>
<td>xià</td>
<td>DOWN</td>
</tr>
</tbody>
</table>

These nine verbs have some interesting properties. First, any one of them can occur as an independent verb. Second, any of them except dào “arrive” can be immediately followed by the deictic path verbs. Third, their combination with the deictic verbs can either function alone, or be preceded by a path verb of the third type that we are going to examine shortly, as well as by the manner verbs of motion and of general actions.

2.3.2.3 General path verbs

There are also some path verbs in Chinese that seem to belong to a class of their own. None of them can immediately precede a deictic path verb, but any of them can be followed by a combination of the first two types of path verbs. Example (26) provides a partial list of this type of path verbs, and (27) provides some examples of the three types of path verbs occurring in an uninterrupted sequence:

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15 The verb dào “arrive” is the only verb among the nine that can be immediately preceded by the deictic verb lái “come,” as in lái-dào meaning “come to” or “arrive at.” The reader is referred to Li and Thompson (1989, p. 409-413) for some interesting properties of dào “arrive.”
(26) chèn “sink” DOWN  
còu “converge” TOGETHER  
dǎo “topple” (pivotally) OVER  
dì “drop” DOWN  
diào “fall” DOWN  
jiàng “fall” DOWN  
luò “fall” DOWN  
mò “submerge” DOWN  
shēng “rise/raise” UP  
tuì “withdraw” BACK  
yuè “pass” PAST  
wéi “crowd around” TOGETHER

(27) dǎo-xià-qù “fall down”  
diào-xià-lái “fall down”  
shēng-shàng-qù “rise up”  
shēng-qǐ-lái “rise up”  
luò-xià-lái “fall down”  
tuì-xià-qù “withdraw”  
wéi-shàng-lái “circle around”  
còu-guò-lái “gather around”  
chén-xià-qù “submerge”

2.4 The linguistic encoding of manner

2.4.1 Manner-of-motion verbs

In Chinese, manner of motion verbs and manner adverbs are the principle linguistic devices for expressing the manner of motion events. When a verb represents both a simple motion and the semantic component of manner of motion, we have a manner-of-motion verb. For example, the English verb run encodes “moving in the manner of running.”

There is considerable cross-linguistic variation in the realization of specific kinds of manners in motion events. Particularly, languages seem to differ with regard to the subtlety of the distinctions they make in the manner of movement. Slobin (1997a, p. 457)

16 The verb diào “fall” has another directional meaning AWAY. For example, pǎo-diào “run-fall” means “run away” or “escape.” Similarly, nà-diào “take-fall” means “take away.”
suggests that languages have a “two-tiered” lexicon of manner-of-motion verbs: the neutral, everyday verbs (e.g., walk) constitute the first tier, while the more expressive or exceptional verbs (e.g., drift, march, skitter, stride, tiptoe and tread) constitute the second tier. In comparison to verb-framed languages, satellite-framed languages contain a richer lexicon of second tier manner-of-motion verbs.

Manner-of-motion verbs in English, for example, make finer distinctions and are more expressive than those in Spanish. The semantic categories in (28) are suggestive of the expressiveness of manner-of-motion verbs in English (Slobin, 2000, p. 119).

(28) Some semantic categories of English manner-of-motion verbs

Rapid motion: bolt, burst, dart, plunge, race, run, rush, scramble, skitter, sprint

Leisurely motion: drift, loiter, stroll, wander

Smooth motion: brush, glide, slide, slip

Obstructed motion: stumble, trip

Furtive motion: crawl, creep, sneak

Manners of walking: march, plod, step, stride, tiptoe, tramp, walk

Manners of jumping: jump, leap, spring

While most languages seem to have basic manner-of-motion verbs such as fly, run, swim, and walk (Wienold, 1995), the manner-of-motion verb system in some languages is characterized by finer distinction such as the different kinds of walking in (28). Whereas the distinctions in (28) are salient in English, most distinctions are not
made in Spanish, which “resorts to separate expressions to convey these rich and fine
distinctions” (Ibarretxe-Antuñano, 2004, p. 325).

Let us consider how these semantic categories are rendered in Chinese.

(29) Some semantic categories of Chinese manner-of-motion verbs

\begin{itemize}
  \item \textit{Rapid motion}: pǎo “run,” chōng “sprint,” cuàn “scurry,” mào “appear
    suddenly,” bēn “run,” luè “skitter”
  \item \textit{Leisurely motion}: guàng “stroll”
  \item \textit{Smooth motion}: huá “glide, slide, slip”
  \item \textit{Obstructed motion}: pánshān “stumble”
  \item \textit{Furtive motion}: liū “sneak”
  \item \textit{Manners of walking}: zǒu “walk,” mài “stride”
  \item \textit{Manners of jumping}: tiào “jump,” cuàn “leap,” yuè “spring”
\end{itemize}

Example (29) suggests that Chinese divides the semantic domain of “rapid
motion” and “manner of jumping” in a way similar to English. While one might find
some distinctions for other semantic domains, the motion verb lexicons for those domains
are sparsely populated. This seems to support Chu’s (2004) conclusion that [manner +
motion] conflation in Chinese is much less pervasive than in English\footnote{Chu (2004) does not quantify his statement, though. In Chapter 3 and Chapter 4, we will provide some preliminary evidence that Chinese, in comparison to English, tends to make less fine-grained manner distinctions.}, even though
Chinese is said to have a rich lexicon of verbs expressing manner of motion (Slobin,
2000).
2.4.2 Manner adverbials

The expression of Manner does not have to be restricted to the verb root or to one lexical item. Manner information can be expressed in several different words and constructions, or in the terminology of Sinha and Kuteva (1995), this information can be “distributed” over these elements. In English, for example, it’s very common for an adverb such as fast to modify run as in (30) despite the fact that the manner verb run already expresses the speed of movement.

(30) The man is running very fast toward the classroom.

In Chinese, manner adverbs such as those in (31) usually appear before the verb or verb sequence to indicate manner of movement.

(31) a. Tā qiāoqiāo-de zǒu-guò-qù. [adult05.cha]
        he quietly walk-pass-go
        “He quietly walked over (away from the speaker).”

b. Yúshì tā màn màn-de yóu-guò-qù. [adult06.cha]
        so he slowly swim-pass-go
        “So he slowly swam over (away from the speaker).”

In addition, either a path verb preceded by manner verb in a gerund-like form (32a), or a serial verb construction in which the first verb slot is occupied by a manner-of-motion verb (32b) might be used to express the same motion event.

(32a) Tā zǒu-guò-qù de qiāoqiāo. [adult05.cha]

(32b) Yúshì tā yóu-guò-qù de màn màn. [adult06.cha]
(32) a.  Wō pǎo-zhe jìn-le jiàoshì.
I run-ZHE enter-LE classroom
“I entered the classroom running.”

b.  Wō pǎo-jìn-le jiàoshì.
I run-enter-LE classroom
“I ran into the classroom.”

The manner-of-motion verb pǎo “run” and the durative aspect marker –zhe form an adverbial clause to express the manner of movement.

2.5 The linguistic encoding of cause of motion

In English, cause typically conflates with motion in the verb as in (33).

(33) a.  The girl blew[cause + motion] the napkin off the table.

b.  The girl threw[cause + motion] the ball into the hole.

Chinese is said to be like English in the conflation of cause and motion in the verb. Talmy claims that “Chinese is the same type of language as English. It conflates Manner or Cause with Motion in its verbs” (Talmy, 1985, p. 68). However, three points are worth mentioning regarding Talmy’s claim above. First, the cause component can be combined with the motion component, and be represented in the same transitive verb. These verbs may include but are not limited to gān “herd,” jū “lift,” rēng “throw,” shuāi “throw,” tuī “push,” and so on. The position for these verbs is the same as manner-of-
motion verbs when they occur in a serial verb construction. Second, some transitive verbs such as nòng “make,” ná “get,” and so on may appear in sentences expressing caused motion, but they do not encode the meaning of motion themselves. These may also include contact verbs such as pèng “touch,” and placement verbs such as fàng “put.” Rather, the motion component is usually encoded or implied in the directional path verbs that follow them in a serial verb construction.

(34) Yī-xià bā zhè-gè xiǎo pèngyǒu nòng-dào nà-gè shuǐtán lǐ qù-le. [adult11.cha]
    once BA this-CL little friend make-reach that-CL waterhole in go-LE
    “(The deer) suddenly made the little boy go into the waterhole.”

(35) Yúshì tāměn ná-zǒu-le yī-gè xiǎo qīngwā. [adult04.cha]
    so they get-walk-LE one-CL little frog
    “So they took a little frog away.”

Third, caused motion is typically associated with the bā construction in Chinese, which “focuses on the disposal nature of the action verb” (Li & Thompson, 1989, p. 478). In example (36) below, the figure object nà-gè máfēng-wō “that hornet’s nest” ended up changing its location from presumably the tree to the ground.

(36) Tā bā nà-gè máfēng-wō gěi pèng-dào dìxià lái le. [adult11.cha]
    it BA that-CL hornet-nest give touch-arrive ground come LE
    “It (the dog) knocked the hornet’s nest down onto the ground.”
The movement of the hornet’s nest was caused by the dog’s trying to touch (i.e., \( pèng \)) it. Roughly speaking, (36) expresses the two separate events in (37) in a compact way.

(37) \( Tā pèng nà-gè māfēng-wō. \rightarrow Nà-gè māfēng-wō dào dīxià lái le. \)
    he touch that-CL hornet-nest that hornet-nest arrive ground come LE
    “He touched that hornet’s nest. \rightarrow That hornet’s nest fell on the ground.”

2.6 The verb patterns of expressions of motion in Chinese

We have seen above that both manner and path components of a motion event can be encoded in verbs together with the motion component in Chinese. This is not something special, for other languages also have manner and path both encoded in verbs as in English (a satellite-framed language) and Spanish (a verb-framed language).

(38) a. The man entered the house running. [English]
    b. El hombre entró a las casa corriendo. [Spanish]
    the man entered to/in the house running
    “The man ran into the house.”

What makes Chinese special, and different from English and Spanish, however, is the fact that manner verbs and path verbs typically occur in a serial order forming serial-verb constructions. A manner-of-motion verb can occur with a non-deictic path verb as in (39), with a deictic path verb (40), or with both (41) where a non-deictic path verb is followed by a deictic path verb.
Motion event descriptions such as those in (39), (40) and (41) all involve a manner-of-motion verb, and we will call them manner-of-motion expressions or manner expressions for short. These examples show that Chinese allows the option of expressing

\footnote{The surface ordering of these verbs in this construction was argued to follow the cognitive/temporal ordering of the events that these verbs express (e.g., Tai, 1985; Li, 1993).}
manner and path together in a serial verb construction. Traditionally, the path verbs that follow the manner verb in a serial verb construction are treated as “directional complements” (e.g., Li & Thompson, 1989). Talmy (1985, 2000) treats these directional complements as satellites to the manner verb which is in turn considered as the main verb of the clause. Consequently, Chinese is classified as a satellite-framed language. The manner verb, however, is optional in a serial-verb construction. Each of the motion event descriptions in (42) to (45) involves one path verb alone or several path verbs forming a serial verb construction, but no manner-of-motion verb. We will call these expressions of motion events containing path verbs only path expressions.

Let us start with the simplest path expressions, with only one path verb, either non-deictic (42) or deictic (43).

(42) Path verb (non-deictic)

Nà xiǎo nánhái hé xiǎo gòu jiù chū-le jiā mén. [adult12.cha]
that little boy and small dog then exit-LE home door

“Then, the little boy and the little dog went out of their home.”

(43) Path verb (deictic)

Ránhòu yòu lái-le yī-qún qīngwā. [adult01.cha]
then again come-LE one-group frog

“Then another group of frogs came (toward the speaker).”

The simplest path expressions exemplified by (42) and (43) indicate that path verbs in Chinese can function alone as the main verb of the sentence. This is a fact that
doesn’t seem to have been taken into consideration in Talmy’s (1985, 2000) characterization of Chinese in the motion event typology.

Let us continue to see how path verbs themselves can co-occur in serial verb constructions to build up more complex path expressions.

(44) Path verb (non-deictic) + Path verb (deictic)

Mǎfēng quán chū-lái-le. [adult04.cha]

wasp all exit-come-LE

“All the wasps came out.”

Example (44) suggests that non-deictic path verb and deictic path verb combinations, which are treated as “directional complements” (Li & Thompson, 1989) or “satellites” (Talmy, 2000) can function alone as main verbal elements of the clause. Examples (45) and (46) below suggest deictic path verb and non-deictic path verb combinations, and non-deictic path verb and non-deictic path verb combinations are also both possible in Chinese.

(45) Path verb (deictic) + path verb (non-deictic)

Tǎmēn lái-dào-le yī xiǎo shù páng. [adult01.cha]

they come-arrive-LE one little tree side

“They came to the side of a little tree.”
(46) Path verb (non-deictic) + Path verb (non-deictic)

Māotóuyīng huí-dào dòng lǐ. [adult09.cha]

owl return-arrive hole in

“The owl came back into the hole.”

Example (47), on the other hand, suggests that three path verbs can occur in a sequence, forming a most complex path expression in Chinese.

(47) Path verb (non-deictic) + Path-verb (non-deictic) + Path-verb (deictic)

(Jǐ-gè háizi yě dōu wéi-le-guò-lái. [9yrs08.cha]

several-CL child also all circle-LE-pass-come

“Several children also all gathered around.”

The examples in (39-47) all involve self-directed motion, where the figure object initiates its own movement resulting in a change of location. But serial verb construction is available for caused motion in Chinese as well. Consider the examples in (48-51).

(48) Transitive manner verb + (non-deictic) path verb + (deictic) path verb

Tā bā zhè xiǎo nánhái gěi rēng-le-xià-qù. [adult02.cha]

he BA this little boy give throw-LE-descend-go

“He threw the little boy down (away from the speaker).”

---

19 Chu (2004, p. 183) suggests that there is a limitation on cumulative Path components in Mandarin Chinese. To quote him, “In general, Chinese only permits ‘non-Deictic + Deictic complement’ combinations, while ‘Non-Deictic + Non-Deictic’ combination pattern is not licensed.” The example in (46), however, obviously contradicts his suggestion.
Transitive manner verb + (non-deictic) path verb

Yī-xià rēng-dào yī-gè shuǐtán lǐbān. [adult12.cha]

Once throw-reach one-CL waterhole inside

“(The deer) suddenly threw (the boy) into a waterhole.”

Non-motion neutral verb + (non-deictic) path verb

Yī-xià bǎ zhè-gè xiǎo pěngyǒu nòng-dào nà-gè shuǐtán lǐ qù-le. [adult11.cha]

once BA this-CL little friend make-reach that-CL waterhole in go-LE

“(The deer) suddenly made the little boy go into the waterhole.”

Non-motion neutral verb + (non-deictic) path verb + (deictic) path verb

Xīāo-gòu bā nà-gè māfēng-wō nòng-xià-lái-le. [5yrs01.cha]

little-dog BA that-CL wasp-nest make-descend-come-LE

“The puppy caused the hornet’s nest to fall down (toward the speaker).”

The above four examples all involve caused motion where an agent causes the figure objects to move from one place to another. Examples (48) and (49) involve a serial verb construction in which the first verb slot is occupied by a transitive manner-of-motion verb rēng “throw,” while examples (50) and (51) by a non-motion neutral verb nòng “make.”

2.7 The place of Chinese in motion event typology

According to Talmy’s typology, in satellite-framed languages, a satellite typically encodes the path of movement, while the main verb as the head of a sentence encodes information about the manner of movement. In verb-framed languages, by contrast, path
is characteristically encoded in the main verb, while manner is encoded in an adjunct construction.

The classification of Chinese in motion event typology has been a highly controversial issue. Since Talmy's (1985, 2000) motion event typology is based on how the path component is represented by surface linguistic elements, the typological classification of Chinese depends crucially on the grammatical status of the path verb in a serial verb construction. If the path verb is the main verb or head of the sentence as when it occurs alone, Chinese should fall into Talmy’s class of verb-framed languages. If the path verb is a satellite element to the manner verb in a serial verb construction, Chinese should then fall into Talmy’s class of satellite-framed languages. These two different views regarding the grammatical status of the path verb in a serial verb construction have been the center of debate among Chinese linguists. While linguists such as Hsueh (1989) and Tai (2003) consider the path verb occupying the second or final verb slot of a serial verb construction as the main verb or the head of the construction, others such as Chao (1968), Li and Thompson (1989), and Chang (2001) regard it as “complement” or satellite to the first verb. Each group has some facts and observations that are problematic to the other, and there is no sign for a settlement in the near future. What is left out of consideration is a third possibility that all the verbs in a serial verb construction are of equal status, since there is no distinction between finite and non-finite forms for these verbs and each is syntactically free. If we accept this position, then Chinese might be neither a verb-framed language nor a satellite-framed language. Instead, it could belong

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20 Talmy (2000, p. 102) defines a satellite as “the grammatical category of any constituent other than a noun-phrase or prepositional phrase complement that is in a sister relation to the verb root. It relates to the verb root as a dependent to a head.” There is nothing in the definition, therefore, to prevent a path verb to serve as a satellite to another verb.
to the class of what Slobin (2004) calls “equipollently-framed” languages, where the verbs in a serial verb construction are syntactically equivalent and do not relate to each other as a dependent to a head.

In addition to determination of the grammatical status of the path verb in the manner verb + path verb construction, other factors also need to be considered in the typological classification of Chinese. First, the debate on the grammatical status of a path verb in a serial verb construction in Chinese is relevant only in cases where a manner verb and a path verb occur in an uninterrupted sequence. However, not only can path verbs be used alone as the main verb in a motion event description, but as we have seen in Section 2.6, several path verbs can also occur together in a serial verb construction. There is no question that one of the path verbs will function as the main verb when two or three of them occur in a sequence. Therefore, even when the path verb is considered as a satellite to the manner-of-motion verb in a manner-of-motion verb + path verb combination, one will have to decide whether manner-of-motion verb + path verb constructions or path verb + (path verb) constructions are more characteristically used in Chinese to express motion events. Let us define manner expressions as those involving one manner-of-motion verb with or without path verbs, and path expressions as those involving one or more path verbs. Are manner expressions more characteristically used to express motion events in Chinese? Or are path expressions more characteristically used to express motion events in Chinese?

Second, we also need to consider whether Chinese might exhibit what Talmy (2000) considers as a “parallel system of conflation,” where “a language can use different
conflation types with roughly comparable colloquiality in the representation of the same type of Motion event” (p. 66). Take the English sentences in (52) for example.

(52)  a. The man ran into the house.
    b. The man entered the house running.

If the construction type in (52b) were as colloquial as the one in (52a), which according to Talmy is not the case, then English would exemplify a parallel system of conflation. As we’ve seen earlier in our discussion of the encoding of manner, a serial verb construction or a path verb preceded by manner verb in a gerund-like form might be used to express the same motion event in Chinese.

(53)  a. Wō pāo-jin-le jiàoshi.
    I run-enter-LE classroom
    “I ran into the classroom.”
    b. Wō pāo-zhe jin-le jiàoshi.
    I run-ZHE enter-LE classroom
    “I entered the classroom running.”

If both constructions in (53) are equally colloquial, then it is difficult to classify Chinese as a satellite-framed language or a verb-framed language.
2.8 Summary

In the above sections, the formal encoding of motion events in Chinese was introduced, and the place of Chinese in motion event typology was discussed. At the current state of knowledge, it is difficult to evaluate any of these proposals and to settle the issue of the place of Chinese in motion event typology through pure linguistic analyses. While Talmy’s typological framework provides a starting point for the exploration of language acquisition and use, the controversy regarding the place of Chinese in motion event typology suggests that we need to go beyond formal analyses of motion events based on linguists’ intuitions, and turn our attention to actual language use. Slobin (1996a, p. 195) put it well when he suggests that “[I]n order to characterize the linguistic encoding of such events, then, one must attend to usage, as constrained by typology.” In the next two chapters, therefore, we will have a more detailed look at the expression of motion events in Chinese in the usage context of narrative – both elicited spoken narrative and fictional written narrative.
3.0  Introduction

Talmy (1985–2000) differentiates verb-framed languages (e.g., Spanish) and satellite-framed languages (e.g., English) based on whether they use the main verb or a satellite element to the main verb to *characteristically* represent the semantic component of the path of motion events. In Spanish, for example, it is typically the main verb of a clause that represents the path component, whereas in English it is typically a verb particle that serves this function. This can be illustrated by the two equivalent sentences in (54a) and (54b).

(54) a. The man ran into the house.  [English]

b. El hombre entró corriendo a la casa.  [Spanish]

the man entered running to the house

In the English example (54a), the main verb does not encode the path component, but rather expresses the act of motion itself together with information about manner of motion. Path information is expressed in the satellite element *into*. In the Spanish example (54b), on the other hand, the main verb expresses the path information, leaving a separate element *corriendo* “running” to encode the manner information. The difference between verb-framed languages (e.g., Spanish) and satellite-framed languages (e.g., English) with respect to how the path component of a motion event is characteristically lexicalized turns out to have implications for how speakers of these two types of languages habitually deal with motion events in connected discourse (e.g., narrative). Detailed analyses of descriptions of motion events depicted in a 24-page wordless picture
book “Frog, where are you?” (Mayer, 1969) elicited from speakers of verb-framed languages on the one hand, and speakers of satellite-framed languages on the other, have revealed major differences at the levels of lexicon, syntax and discourse (Berman & Slobin, 1994). It was found that narrators using satellite-framed languages (i.e., English and German) pay much more attention to manner of movement and to extended paths of motion, in contrast to speakers of verb-framed languages (Spanish, Hebrew, and Turkish), who prefer to devote narrative attention to scene-setting rather than extended, dynamic descriptions of the movements of protagonists. This pattern of contrast has been confirmed by independent researchers in various countries (e.g., Slobin, 1997a, and the collection of papers in Strömqvist & Verhoeven, 2004), and is “apparently independent of language family, geographical area, and culture” (Slobin, 2003, p. 164).

Slobin (1996a, p. 205) summarizes the contrasting ways in which English narrators and Spanish narrators deal with motion events in their frog stories as follows:

[A]nalysis of the frog stories reveals a distinct contrast in rhetorical style between English and Spanish. English-speakers may devote more attention to the dynamics of movement because of the availability of verbs of motion (often conflated with manner) that can readily be associated with satellites and locative prepositional phrases to trace out detailed paths in relation to ground elements. Spanish-speakers, by contrast, seem to be led by their language to devote less narrative attention to the dynamics and perhaps somewhat more attention to static scene setting.
Specifically, in comparison with English narrators, Spanish narrators (i) use a smaller set of motion verbs; (ii) mention fewer ground elements in individual clauses; (iii) describe fewer segments in complex motion events; and (iv) provide more elaborate descriptions of the physical settings in which movement takes place (and leaving paths to be inferred).

Talmy (1985, 2000) suggests that the two-way split between verb-framed languages and satellite-framed languages constitutes a basic typological distinction that may be applicable to all languages. Chinese, however, seems to present a challenge to the dichotomous typology of motion events, because researchers do not always agree on the grammatical status of the linguistic element that represents the path component of a motion event. While Talmy (1985, 2000) considers Chinese as a satellite-framed language, Tai (2003) argues that Chinese is primarily a verb-framed language. More recently, Slobin (2004) revised Talmy’s two-way typology by adding a third type, suggesting that Chinese belongs to this third type of equipollently-framed languages.

The conflicting views regarding the place of Chinese in motion event typology, coupled with the narrative consequences of the linguistic typology, raise some interesting questions for the study of motion event expressions in Chinese. In particular, what pattern may one expect to find in motion event descriptions by speakers of Chinese?

If Chinese is a satellite-framed language, we would expect Chinese speakers to use strategies similar to those of English speakers when analyzing the descriptions of the same type of events in these two languages. Specifically, Chinese speakers would be expected to (i) use a large set of motion verbs, (ii) mention several ground elements in individual clauses, (iii) break a complex motion event into several components and
describe them one by one by means of separate action clauses, and (iv) provide limited
descriptions of the physical setting in which movement takes place.

If Chinese is a verb-framed language, we would expect Chinese speakers to use
strategies similar to those of Spanish speakers when analyzing the descriptions of the
same type of events in these two languages. Specifically, Chinese speakers would be
expected to (i) use a few number of motion verbs, (ii) mention few ground elements in
individual clauses, (iii) avoid breaking a complex event into many segments and
describing them with separate action clauses, and (iv) provide rich descriptions of the
physical setting in which movement takes place.

If Chinese is an equipollently-framed language, we would expect Chinese
speakers either to use a mixture of the sort of strategies used by English and Spanish
speakers or perhaps Chinese speakers should be expected to alternate somewhat
unpredictably between the two strategies when describing motion events.

To address these issues, this chapter examines the habitual pattern of motion
event descriptions by speakers of Chinese. Motion event descriptions in oral narratives
elicited from Chinese speakers from different age groups using the wordless picture story
book *Frog, where are you?* (Mayer, 1969) are analyzed, and are compared with
comparable data in English and Spanish. We focus on the use of motion verb, the
description of ground elements, the description of complex motion events, and the
description of the physical setting in which movement takes place.
3.1 The *frog story* method

Mayer’s (1969) wordless picture book “*Frog, where are you?*” has been used to elicit standard narratives from speakers of different age groups and of different languages. This wordless picture book tells a story about a boy and his dog searching for their runaway pet frog. These narratives are thus called “frog stories,” and the research method is now commonly known as the frog story method (Berman & Slobin, 1994). To make sure that all subjects were familiar with the story content, and had an opportunity to conceptualize the overall goal structure of the pictures, each subject was given a chance to look through the entire picture book before they started to narrate the story. Then they told the story to the interviewer in a one-to-one setting while again looking at the pictures. In an attempt to minimize interviewer’s control over each subject’s narrations, only minimal instructions, such as “this is a story about a boy and a dog,” or verbal prompting, such as “what’s next” or “what about the boy?” are given (Berman & Slobin, 1994, pp. 22-25).

This wordless picture book invites a rich collection of motion event descriptions, and presents an excellent source for the crosslinguistic study of motion event descriptions in connected discourse. The same set of events can be narrated by speakers of different languages, and consistent differences, if found, cannot be attributed to the stimulus. For example, if certain aspects of events shown in the picture are proved likely to be expressed by one language group but not by others, that means those aspects are given special attention by speakers of one language in the course of verbalization while they are ignored by speakers of other languages.
3.2 Sample and procedures

The sample comes from an existing data corpus frog stories produced by Chinese speakers from five age groups (3, 4, 5, 9, and adults) using the wordless picture storybook Frog, where are you? (Mayer, 1969)\textsuperscript{21}. All the subjects were monolinguals, coming from lower-middle to middle-class literate backgrounds. Children aged 3, 4, and 5 attended a preschool in Beijing, China. The 9-year-olds were third graders, and adults were college students ranging from 18 to 22 years of age\textsuperscript{22}. The number of subjects in each age group was 12, except for the 3-year-olds group which only had 11 children. There are altogether 59 Chinese frog stories.

The motion event descriptions were marked and coded for each frog story. We follow Slobin's (1998) coding system for the analysis of motion event descriptions in oral and written narratives. The focus is on descriptions of actual changes of location, and therefore plans, desires, possibilities, reminiscences, habitual motion events, etc. are excluded from analysis. For example, those in (55) will be excluded:

(55) a. Tā pà shuāi-xià-qù. [3yrs05.cha]
   he fear fall-descend-go
   “He's afraid of falling down (away from the speaker).”

b. Tā hái méi pá-shàng-lái. [4yrs09.cha]
   it yet not climb-ascend-come
   “It hasn't climbed up yet.”

\textsuperscript{21} The data were collected by Dr. Jiansheng Guo at California State University, East Bay (formerly Hayward). See the acknowledgment.

\textsuperscript{22} Chinese children typically go to elementary school at the age of 7. Before that, they go to preschools, which are called kindergarten in the Chinese education system. Chinese kindergartens start to teach basic numerical calculation and literacy.
Each motion event description coded expressed a single event, and took the form of a clause containing either one single verb (56a), or several verbs in a serial verb construction (56b).

(56) a. *Ránhòu yòu lái-le yī-qun qīngwā.* [adult01.cha]
    then again come-LE one-group frog
    “Then another group of frogs came (toward the speaker).”

    bottle in DE frog run-exit-go-LE
    “The frog in the bottle ran out (away from the speaker).”

First, all verbs in the motion event descriptions were identified. Percentages of different types of verbs (i.e., path verbs, manner-of-motion verbs, and non-motion neutral verbs), and percentages of different types of serial verb constructions (i.e., manner + path verb sequences, path + path verb sequences, and neutral + path verb sequences) were computed. Example (57) presents the different types of verbs included in the analysis.

(57) a. **path verbs**
    V:p (non-deictic path verb) = *jìn* “enter”
    V:i (deictic path verb) = *lái* “come”

b. **manner-of-motion verbs**
    V:m (intransitive manner-of-motion verb) = *pāo* “run”
    VT:m (transitive manner-of-motion verb) = *tuī* “push”
c. **neutral verbs (non-motion activity verbs)**

V:o (intransitive verbs that are not motion verbs) = wen “smell”

VT:o (transitive verbs that are not motion verbs) = nòng “make”

(58) presents the different types of serial verb constructions included in the analysis.23

(58) **manner + path** (a transitive or intransitive manner-of-motion verb followed by a non-deictic path verb or a deictic path verb or both)

\[
\begin{align*}
\text{pāo-jīn-

\text{qù} & \text{ “run-enter-go”} & \text{rēng-jīn-

\text{qù} & \text{ “throw-enter-go”} \\
\text{pāo-dào} & \text{ “run-arrive”} & \text{rēng-dào} & \text{ “throw-arrive”} \\
\text{pāo-

\text{qù} & \text{ “run-go”} & \text{rēng-

\text{qù} & \text{ “throw-go”} \\
\end{align*}
\]

(path + path) (any possible path verb combination)

\[
\begin{align*}
\text{chū-

\text{lái} & \text{ “exit-come”} \\
\text{lái-

\text{dào} & \text{ “come-arrive”} \\
\text{guǎi-

\text{guò-

\text{lái} & \text{ “turn-pass-come”} \\
\end{align*}
\]

neutral-path (non-motion verbs followed by one or two path verbs)

\[
\begin{align*}
\text{wēn-

\text{guò-

\text{qù} & \text{ “smell-pass-go”} \\
\text{jīng-

\text{chū-

\text{lái} & \text{ “frighten-exit-come”} \\
\end{align*}
\]

Second, linguistic elements that specify the ground of movement (i.e., source, goal, or landmarks along a path) were identified for each motion event description. A distinction was made between **minus-ground clauses** without any specification of the

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23 For the sake of simplicity, if two path verbs follow another verb (manner-of-motion, or path, or neutral), the analysis treats the pattern as if there is only one path verb.
ground of movement (59a), and plus-ground clauses that attach one or more pieces of information about ground of movement (59b).

(59)  

a. **Minus-ground clause**

\[Qīngwā qiāoqiāo-de pāo-chū-qù-le.\]  
frog stealthily run-exit-go-LE

“The frog ran away.”

b. **Plus-ground clause**

\[Qīngwā jiù cóng bōlǐpíng[source] lǐ pāo-chū-lái.\]  
frog then from bottle in run-exit-come

“Then the frog ran out of the bottle (toward the speaker).”

The number of ground elements in each motion event description was computed, too. The examples in (60) may illustrate this point. While there is not any ground element in (60a), there is one in (60b). Whereas there are two ground elements in (60c), example (60d) includes five pieces of information about ground, and “presents a series of linked paths or a path with waystations” (Slobin, 1996a, p. 203).

(60)  

a. He fell (down).

b. He fell down into the water[goal].

c. He fell from the cliff[source] down into the water[goal].
d. He went from the station, along the avenue and through the crowds, past the monument, to his office.

For the purpose of this study, the narrative segments, as well as descriptions of physical setting in which movement takes place, of one particular scene in the story, viz., the deer scene, were also identified for each frog story produced by adult speakers. The deer scene consists of pictures 13-18 in the storybook. Example (61) presents verbal descriptions of key elements of these pictures.

(61) Verbal descriptions of the deer scene

Picture 13: The boy, fleeing from an owl, starts to climb a large rock. Something that appears to be bare branches is sticking up.

Picture 14: The boy is standing on top of the rock, holding on to the branches.

Picture 15: The boy is caught up in the bare branches, which turn out to be antlers of a deer.

Picture 16: A deer, with the boy still on its head, is moving toward the edge of what seems to be a cliff. The dog is leaping in front of the deer.

Picture 17: The deer stops at the edge of the cliff. The boy and the dog are falling.

Picture 18: The boy and the dog land in a stream, while the deer is smiling over the edge of the bank at them.

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This example is cited from Slobin (1997a, p. 439).
According to Slobin (1996a), there are six narrative segments in the *deer scene*.

They are listed in (62).

(62)  *The six narrative segments of the “deer scene”*

a. Deer starts to run  
b. Deer runs, carrying boy  
c. Deer stops at the cliff  
d. Deer throws boy (off the antlers/down)  
e. Boy and dog fall  
f. Boy and dog land in water

The Spanish narration of the scene in (63) exemplifies the description of the setting in which the movement takes place.

(63)  *El ciervo le llevó hasta un sitio, donde debajo había un río. Entonces el ciervo tiró al perro y al niño al río, y después, cayeron.*

“The deer took him until a place, where below there was a river. Then the deer threw the dog and the boy to the river. And then they fell.” [Age 9, Slobin, 1997b, p. 25, his example (10b)]

The static description of the physical setting in which the action takes place: *a place where below there was a river* in (63) allows one to infer the trajectory as moving from some elevated place to the river. Previous studies on motion event descriptions in
English and Spanish frog stories have found that English narrators tend to mention more narrative segments but provide no description of the physical setting in which movement take places, whereas Spanish narrators do the opposite (e.g., Slobin, 1996a). The examination of these two categories may therefore enable us to see whether Chinese narrators pattern with English narrators or Spanish narrators.

Results from previous studies on motion event descriptions in English and Spanish frog stories, especially that of Slobin (1996a), serve as a point of departure. There are 60 frog stories in each of the two languages, with 12 each from the following age groups: 3, 4, 5, 9, and adults. The frog stories in English, Chinese, and Spanish were all collected using the same standard procedure and the same stimulus material from an almost equal-sized group of speakers of similar social economic background. English and Spanish frog stories are chosen as reference points for several reasons. First, English and Spanish represent opposite poles of the typological dichotomy between satellite-framed language and verb-framed languages. Second, motion event descriptions in English and Spanish frog stories have been analyzed and reported in a number of studies (e.g., Berman & Slobin, 1994; Slobin, 1996a, 1997b, 2000), and are available to the public for free use on Child Language Exchange System (CHILDES, MacWhinney, 2000).

3.3 Results

3.3.1 Uses of motion verbs:

Motion verbs in Chinese can be examined in two ways. First, we can consider them as individual entities, regardless of whether they function alone or occur in a serial verb
construction. (e.g., wéi-guò-lái “encircle-pass-come” = “crowd around”). In this case, we are interested in the different types of motion verbs and their frequencies of use (tokens). This examination allows one to find out the relative distribution of manner-of-motion verbs in comparison to path verbs. Second, motion verbs can be examined as components of different types of serial verb constructions. In this case, we are interested in the relative distribution of serial verb constructions with a manner-of-motion verb (e.g., pǎo-chū-lái “run-exit-come”) as contrasted to those without a manner-of-motion verb (e.g., chū-lái “exit-come”). This examination allows us to find out the relative frequency of different types of serial verb constructions that are used to describe motion events.

Table 1 presents the entire collection of verbs (both motion and non-motion neutral verbs) produced by Chinese narrators in the 59 frog stories. The motion verbs used include deictic paths, non-deictic path verbs, transitive and intransitive manner-of-motion verbs. There are altogether 63 different types of motion verbs, including 45 types of manner-of-motion verbs and 18 types of path verbs. The 45 types of manner-of-motion verbs account for 72% of all the motion verbs used.

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25 Motion event descriptions in Chinese frog stories are also characterized by the frequent use of the two deictic path verbs lái “come” and qù “go.” The two verbs are used in 624 (i.e., 55%) of the 1139 motion event descriptions found in Chinese frog stories.
Table 1 *The entire collection of motion verbs in Chinese frog stories*

<table>
<thead>
<tr>
<th>Verb Categories</th>
<th>Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deictic path verbs</td>
<td>lài “come,” qù “go” (2 types)</td>
</tr>
</tbody>
</table>
Table 2 presents the use of different verb patterns found in motion event
descriptions in Chinese frog stories. Two observations can be made. First, Chinese
narrators used 242 different types of serial verb constructions (i.e., sequences of two or
three verbs in a single clause) to express motion events, and a large percentage of them
(165 or 68% out of 242) involved a manner-of-motion verb. Second, Chinese narrators
made frequent use of these serial verb constructions to describe motion events.
Specifically, the figures in the leftmost column show that 77% of motion event
descriptions (880 out of 1139) in Chinese frog stories contained a combination of two or
three verbs in a single clause.

<table>
<thead>
<tr>
<th>Table 2 Distribution of verb patterns in Chinese frog stories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Types</strong></td>
</tr>
<tr>
<td>---------------------------------</td>
</tr>
<tr>
<td>manner + path</td>
</tr>
<tr>
<td>path + path</td>
</tr>
<tr>
<td>neutral + path</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
</tr>
<tr>
<td>---------------------------------</td>
</tr>
<tr>
<td>manner verb alone</td>
</tr>
<tr>
<td>path verb alone</td>
</tr>
<tr>
<td>neutral verb alone</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
</tr>
</tbody>
</table>

The verb patterns in Table 2 fall into three groups: manner expressions, path
expressions, and neutral expressions. Manner expressions include those containing a
manner-of-motion verb followed by one or more path verbs (e.g., pǎo “run,” pǎo-dào
“run-arrive,” *pāo-chū-lái* “run-exit-come”). Path expressions include those containing path verbs only (e.g., *shàng* “ascend,” *shàng-lái* “ascend-come,” or *dāo-xià-qù* “topple-descend-go”), neutral expressions include those contain a non-motion neutral verb followed by one or more path verbs (e.g., *fàng* “put,” *fàng-jìn-qù* “put-enter-go”). The percentage distribution of the tokens of the three groups of expressions is presented in Figure 1.

![Figure 1. Frequency distribution of manner, path, and neutral expressions in Chinese frog stories](image_url)

Figure 1 shows that a large proportion of motion event descriptions in Chinese frog stories are manner expressions involving a manner-of-motion verb. The verb can either occur alone or together with one or two path verbs.

### 3.3.2 Descriptions of ground elements in individual clauses

Table 3 summarizes the distribution of motion event descriptions with some specification of the ground of movement. Only 595 (i.e., 52%) of motion event
descriptions contain some specification of the source, goal, or medium of movement. The majority of the ground elements mentioned are related to the goal or endpoint of movement.

Table 3 Distribution of plus-ground clauses by the type of ground elements

<table>
<thead>
<tr>
<th></th>
<th>Token</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal-marking clauses</td>
<td>456</td>
<td>40%</td>
</tr>
<tr>
<td>Source-marking clauses</td>
<td>131</td>
<td>11%</td>
</tr>
<tr>
<td>Medium-marking clauses</td>
<td>9</td>
<td>1%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>595</td>
<td>52%</td>
</tr>
</tbody>
</table>

After an examination of all the plus-ground motion event descriptions (i.e., those with some specification of the source, goal, or medium of movement), only one example was found which mentioned more than one ground element. Source and goal of movement were both mentioned only in example (64).

(64)  *Mìfēng cóng fēngcháo lǐ xiàng wài fēi-chū.*  [adult05.cha]

bee from beehive in toward outside fly-exit

“Bees flew out from the beehive.”

Therefore, Chinese narrators of *frog stories* tended not to provide ground elaboration in individual clauses. Their tendency was to provide no specification of the

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26 Percentages were computed by dividing the total number of each type of ground-marking clauses by the total number of motion event clauses (1139) in Chinese *frog stories.*
ground of movement, and to limit themselves to one piece of information (source, goal, or medium) if the ground was described.

3.3.3 Descriptions of narrative segments of the deer scene

Table 4 presents the results about the number of narrative segments mentioned by each adult Chinese speaker in their narration of the deer scene.

Table 4 Number of event segments mentioned by each adult Chinese narrator of the deer scene

<table>
<thead>
<tr>
<th>Narrators</th>
<th>01</th>
<th>02</th>
<th>03</th>
<th>04</th>
<th>05</th>
<th>06</th>
<th>07</th>
<th>08</th>
<th>09</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>TOTAL</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of segments described</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>5</td>
<td>42</td>
<td>3.5</td>
</tr>
</tbody>
</table>

Results show that all but one (i.e., 92%) of the Chinese adult speakers mentioned at least three event segments of the scene. Half of them mentioned more than 3 segments. Moreover, the average number of narrative segments produced by adult Chinese speakers in their narration of the deer scene was 3.5 segments. These results suggest that Chinese narrators tend to break a complex motion event into several components, and describe them one by one by means of a series of separate action clauses. Let us consider one narration of the deer scene by an adult Chinese speaker.

(65) A narration of the deer scene by a Chinese adult speaker

Zhèshíhòu xiǎogōu yǐjīng pāo-dào tūduī xiàbiān le.
then puppy already run-arrive hillock below LE

Méi xiǎng-dào, cóng tūduī lǐbiān zuān-chū-lái yǐ-zhī chángjīnglù.
not think-arrive from hillock inside drill-exit-come one-CL giraffe
“At this time, the little puppy had already run up to the bottom of a pile of dirt. To his surprise, a giraffe came out of the pile. The giraffe’s head lifted the boy up. The giraffe was frightened so that it ran away, and ran right up onto a haystack. Meanwhile, the little puppy is chasing the giraffe (and the boy). The giraffe keeps running until it runs up onto a haystack. Then, the giraffe throws the boy down away from the haystack. It throws (the boy) into a waterhole. At the same time, the little puppy also came falling down.”
The narration by this Chinese speaker is highly analytic and provides a very elaborated description of the deer scene. The sequence of separate action clauses also enables the reader or listener to create a vivid image of the actions involved, which in turn enables one to trace out the trajectories of movement.

3.3.4 Static settings versus dynamic movement

Examination of the Chinese frog stories revealed that only two (i.e., 17%) of the adult Chinese narrators provided a locative elaboration of the deer scene by describing the physical setting in which the movement takes place. Consider the following narration by a Chinese adult speaker.

(66) An example of Chinese description of the setting in the deer scene [adult06.cha]

\[
\text{Gōnglù bĕi xiăo nánhái jīng-zhào-le.} \\
\text{deer by little boy scare-affect-LE} \\
\text{Tā jiù pào ā păo ā păo-dào yī-gè xuányá biān.} \\
\text{it then run A run A run-arrive one-CL cliff side} \\
\text{Bă xiăo nánhái hé xiăo gŏu dĭng-le-xià-qù.} \\
\text{BA little boy and little dog tip-LE-descend-go} \\
\text{Jiăoxìng-de shì, shăn-pō dĭxiă shì yĭ-zhăo xiăo hē.} \\
\text{lucky be cliff below be one-CL little river} \\
\text{Xiăo nánhái hé xiăo gŏu dōu mĕiyŏu shuāi-zhăo.} \\
\text{little boy and little dog both not fall-affect}
\]
“The deer was scared by the boy. It ran and ran, until (it) arrived at a cliff. (It) tipped the boy and the puppy down (away from the speaker). Luckily, below the cliff there was a little river. The boy and the puppy were not hurt by the fall.”

The Chinese narrator first mentions the deer’s approaching the cliff, then the deer’s throwing the boy and dog down, and then provides a description of the river below the cliff. It loosely conveys the information that is conveyed compactly in the English example in (67). In this case, the static information about the physical setting serves to compensate for the sparse description of the trajectory of movement.

(67)  The deer starts running and he tips the boy off over a cliff into the water.

[Age 9, Slobin, 1997b, p. 22]

The difference, however, reveals different narrative strategies. While the trajectories in the English narration (67) allow one to infer that there is a cliff located above some water, the static scene-setting in the Chinese narration (66) allows one to infer the trajectory as moving from some elevated place to the river.

3.4 General discussions

3.4.1 The use of motion verbs

The Chinese frog stories suggest that while Chinese speakers have access to manner expressions, path expressions, and neutral expressions to describe motion events, they favor the use of manner expressions, and particularly serial verb constructions involving a manner-of-motion verb plus one or more path verbs (i.e., pão-chū-lái “run-
exit-come”). The diversity of \textit{manner verb + path verb} combinations in Chinese parallels the diversity of manner-of-motion verb + satellite combinations. Slobin (1996a) reports that the 60 English frog stories contain 123 types of verb + satellite constructions, most of which involve a manner-of-motion verb in combination with one or more satellite elements. Therefore, English and Chinese both allow for productive encoding of manner and path of movement in the same clause, in contrast to Spanish which typically encodes manner and path in separate clauses. This should not be surprising if we consider the lexical resources associated with motion event descriptions in these three languages. In English, there is a large collection of verbs of motion which can be flexibly combined with a collection of satellites marking path information and prepositional phrases encoding source, goal or landmarks along a path. In Chinese, there are many motion verbs that can be readily used to build up so-called serial verb constructions. By contrast, Spanish has a small collection of verbs of inherent direction. These are combined with manner expressions when manner is relevant to the discourse.

Slobin (1996a) reports that motion event descriptions in the 60 English \textit{frog stories} and the 60 Spanish \textit{frog stories} differ sharply in the number and type of motion verbs produced by speakers of these two languages. The contrast can be seen from the entire collection of motion verbs in Spanish and English in Table 5 (adapted from Slobin, 1996a, p. 198). It shows that English narrators used a total of 47 distinct motion verbs, whereas Spanish narrators used only 27.
Table 5 *The entire collection of motion verbs in English and Spanish frog stories*

<table>
<thead>
<tr>
<th>Languages</th>
<th>Motion Verb Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>buck, bump, buzz, carry, chase, climb, come, crawl, creep, depart, drop, dump, escape, fall, float, fly, follow, get, go, head, hide, hop, jump, knock, land, leave, limp, make-fall, move, plummet, pop, push, race, rush, run, slip, splash, splat, sneak, swim, swoop, take, throw, tip, tumble, walk, wander</td>
</tr>
</tbody>
</table>

The results in Table 5 also show there are more verbs that conflate motion and manner in English *frog stories* than in Spanish ones. Specifically, there are 35 different types of manner of motion verbs in the English list, that is, 74 percent of the total. By contrast, Spanish only has 11 types (41 percent of the total in that language). Therefore, Chinese narrators pattern very closely with English narrators with respect to the use of motion verbs. Not only do they have access to a large collection of motion verbs, but they both have a rich repertoire of manner-of-motion verbs which allow them to describe the particular manner with which the protagonists move from one place to another. Clearly,
Spanish, English, and Chinese lexicalize the semantic components of manner and path of motion events differently.

In English, the verb root typically conflates the movement per se and the specific manner in which the movement takes place. A satellite to the verb is typically used to convey the core information about the path of movement. By contrast, the verb root in Spanish is the locus of information about the path of movement, whereas “supporting information” about manner of movement is conveyed by a satellite (e.g., a gerund) to the verb. Consequently, according to Slobin (1996a), manner of motion is more codable (i.e., readily included in sentences) in English than in Spanish. Chinese differs from both English and Spanish, and encodes both the core information of path and the supporting information of manner of movement in two separate verbs of equal grammatical status.

(68)  a.  *La botella salió de la cueva flotando.*  [Spanish]

the bottle exited from the cave floating

“The bottle floated out of the cave.”  [English]

b.  *Píngzi piāo-chū-le dòngxuè.*  [Chinese]

bottle float-exit-LE cave

“The bottle floated out of the cave.”

Slobin (2000) suggests that the conflation of motion and manner in the verb root in a satellite-framed language such as English has encouraged its speakers to elaborate the entries in the combined slot for *motion* and *manner*. The production of a syntactically complete sentence requires the slot to be filled by some verb or other, and it carries no
additional cost to elaborate on the semantic domain of manner of movement. As a consequence, “these languages make habitual use of manner verbs when encoding motion events, and have developed large lexicons with many fine-grained distinctions of manner” (Slobin, 2003, p. 164). Chinese also allows for an economical expression of manner of movement with its productive system of serial verb constructions where manner and path movement can be expressed simultaneously. The frequent encoding of manner leads to expansion of available manner expressions in Chinese, which in turn help to increase the frequency of manner encoding.

By contrast, in a verb-framed language such as Spanish, the oftentimes optional expression of manner carries with it some cost, “in that it adds an element or phrase to the sentence” (Slobin, 2000, p. 113). The manner-of-motion lexicons in verb-framed languages are therefore smaller and less differentiated.

### 3.4.2 Descriptions of ground elements per individual clauses

Previous studies on motion event descriptions in *frog stories* produced by speakers of verb-framed languages and satellite-framed languages reveal differences in the specification of the ground of movement (i.e., source, goal, or landmarks along a path). Speakers of verb-framed languages tend to use *minus-ground clauses* including bare verbs and verbs with satellites indicating direction of movement, while speakers of satellite-framed languages tend to use *plus-ground clauses* to attach one or more pieces of information about ground of movement. Our results from analyses of Chinese *frog stories* suggest that Chinese speakers pattern with speakers of verb-framed languages in their description of ground elements in individual clauses.
Slobin (1996a) reports that in English frog stories, minus-ground clauses account for only 18% (as compared to 82% for plus-ground clauses), whereas in Spanish frog stories, the ratio of minus-ground clauses to plus-ground clauses is 37% to 63%. While the use of motion verbs by Chinese narrators has the flavor of satellite-framed languages, their descriptions of the ground have the flavor of verb-framed languages such as Spanish. The ratio of minus-ground clauses to plus-ground clauses in descriptions of motion events in the Chinese frog stories is 48% to 52%. Also, while English frog stories at all ages are rich with expressions formed by a verb in association with more than one ground adjunct, such expressions are rare in Chinese and Spanish frog stories. In situations where more than one ground element can be associated with a verb, Chinese speakers pattern with Spanish speakers and tend to limit the description of ground to one piece of information only (either source or goal of movement, or none), leaving the rest to inference from context. Slobin (1996a) reports that of all the motion event descriptions found in the 60 Spanish oral narratives, only two examples mention both source and goal in relation to a single verb. In the 59 Chinese frog stories, only one example was found that mentioned two ground elements. The two Spanish examples are given in (69).

(69)  

a.  *Se cayó de la ventana a la calle.*  
[age 5; Slobin, 1996a, p. 203]  
“[The dog] fell from the window to the street.”

b.  *Lo lleva campo a través hasta un barranco.*  
[age 9; Slobin, 1996a, p. 203]  
“[The deer] carries him across (the) field to a cliff.”
The occurrences of the only one example (64) in Chinese *frog stories* and the two examples (69) in Spanish *frog stories* suggest two things. First, English, Spanish, and Chinese all use prepositional phrases to encode source or goal of movement, regardless of the language-specific means of expression for paths (Slobin, 1996a). Second, Spanish and Chinese provide their speakers with the linguistic resources of associating two prepositional phrases indicating ground information with a single verb or verb sequence. If nothing in the syntax or lexicalization patterns of Chinese or a verb-framed language such as Spanish would prevent the accumulation of several ground elements in an individual clause, then why do Chinese and Spanish narrators rarely make use of such a strategy when more than one ground element can be associated with a verb or verb sequence? Why do Chinese speakers pattern with speakers of a verb-framed language in their description of ground elements in individual clauses?

The syntactic possibility of appending several pieces of path and ground information to a single (non-path) verb in a satellite-framed language such as English invites its speakers to mention source, goal, medium, and milestones of movement in individual clauses. These ground elements themselves constitute part of the path. The elaboration of ground elements in individual clauses consequently adds to the richness of path elaboration as well. English speakers seem to take advantage of the rich system of satellites marking path information (which can easily accumulate in connection with a single verb) to present elaborate descriptions of trajectories in motion events.

For Spanish, Slobin (1996a) suggests that the tendency just noticed is a consequence of the boundary-crossing constraint in Spanish, while Slobin (1997b, p. 22) modified the explanation suggesting that the tendency is “a consequence of the verb-
framing typology.” The boundary-crossing constraint essentially refers to the rule that the use of a manner verb as the main verb of a clause is not licensed if the path expression predicates a boundary crossing (Aske 1989; Slobin & Hoiting 1994). Example (70a) is grammatical, because it expresses a motion event that does not cross a boundary, and the use of the manner-of-motion verb is legitimate. Example (70b), by contrast, is not grammatical in Spanish, because it expresses a motion event that crosses a boundary (outside of the cave → inside the cave) with the expression a la cueva “into the cave” predicking a boundary crossing event. Therefore, the use of the manner verb flotó “floated” is not legitimate there.

(70) a.  

La botella flotó hacia la cueva
  the bottle floated toward the cave
  “The bottle floated toward the cave.”

b.*  

La botella flotó a la cueva.
  the bottle floated to the cave
  Intended: “The bottle floated into the cave.”

c.  

La botella entró a la cueva.
  the bottle move to the cave
  “The bottle moved into the cave.”

Therefore, a manner-of-motion verb in Spanish in principle can accumulate several ground elements as long as the event does not cross a boundary. In reality, however, it is preferable to use path verbs as the main verb to express motion events, and
the path verbs in Spanish all involve paths in which the figure crosses a boundary. As a result, these path verbs cannot usually accumulate ground elements. And this explains why Spanish speakers tend to mention at most one ground element in individual clauses.

The boundary-crossing constraint does not seem to be applicable in Chinese. Consider example (71) in Chinese.

(71)  Píngzi piāo-chū-le dòngxuè.

bottle float-exit-LE cave

“The bottle floated out of the cave.

Example (71) expresses a boundary-crossing event, and the use of the manner-of-motion verb is legitimate. But then why do Chinese narrators pattern with Spanish speakers in their tendency to limit their descriptions of ground elements in individual clauses? One possible reason may be found in the suggestion of Hendriks (1993) that “[S]ince path may be encoded by the verb, encoding a change of location does not frequently trigger an explicit Ground” (p. 148). That is, in both Chinese and Spanish, the path is typically encoded by the verb.

3.4.3 Descriptions of narrative segments of a complex motion event

Slobin (1996a) reports that all of the 12 adult English narrators of frog stories mentioned at least three of the six narrative segments that form the deer scene, whereas only three quarters (75%) of the Spanish speakers did so. Moreover, while most English narrators mentioned more than three narrative segments, none of the Spanish narrators
did so. This contrast suggests that whereas English speakers tend to break up a scene into several components and use separate action clauses to describe segment by segment what takes place in this event, Spanish speakers tend not to do so.

Our results suggest that Chinese speakers pattern with speakers of satellite-framed languages such as English in their tendency to mention more narrative segments of a complex motion event. All but one (i.e., 92%) of the adult narrators mentioned at least three event segments of the scene. Moreover, the mean number of narrative segments in adult Chinese speakers’ narration of the deer scene is 3.5, which is even higher than that of typical satellite-framed languages at 3.0 (Slobin, 1997a).

Again, let us consider the question of why Chinese speakers tend to pattern with speakers of a satellite-framed language like English, but part company with speakers of a verb-framed language such as Spanish. A complex motion event as depicted in the pictures forming the deer scene presents a series of linked paths (Slobin, 1996a). There are good reasons for Spanish speakers to make full use of this strategy, which they do not in reality. First, since each type of path is encoded in a separate (main) verb in Spanish, the linked paths of a complex event need to be expressed by several individual path verbs which function as the main verb of their respective action clauses. Second, Slobin (1996a) suggests that the boundary crossing constraint for the encoding of motion events would also encourage Spanish speakers to favor separate clauses for each segment of a complex motion event. Third, Spanish speakers make minimal use of plus-ground clauses, and thus provide limited information about the trajectories of movement. Spanish speakers might as well use separate individual clauses to describe the segments of a complex event to compensate for the sparing elaboration of trajectories of movement.
In spite of all these good reasons, why did Spanish narrators of the *frog stories* make sparing use of individual motion verbs (and accordingly separate action clauses) to encode path components of a complex motion event? Slobin (1996a, p. 217) offers the following explanation:

“A series of separate clauses, however, retards the fluent depiction of a journey, perhaps leading to a preference to limit the specification of path details unless absolutely necessary. [...] In addition, each separate main clause demands attention as a foregrounded proposition, thus militating against a proliferation of main clauses, and perhaps favoring subordinate and adverbial clauses in order to maintain a foreground/background contrast.”

By contrast, English speakers tend to break up a complex motion event into a large number of components, because they have developed a narrative habit of compacting several path components in a single clause (Slobin, 1997a).

Why do Chinese speakers pattern with English speakers, but not with Spanish speakers, in their tendency to use a series of individual action clauses to describe segment by segment what takes place in a complex motion event? The absence of the boundary crossing constraint is not the best explanation. Rather the reason seems to lie in the unique way that Chinese compacts several path components in a single clause. While English invites its speakers to append several satellites to a single verb of motion, Chinese does so by compacting several distinct path verbs in a single clause. Let us consider an example we have seen from the previous chapter.
"The boy was so scared that he fell down from the branches of a tree."

In (72), the preposition *cóng* “from” provides us with the information about the source of the movement, the verbs *diào* “fall” and *xià* “descend” about the direction of movement, and the verb *lái* “come” provides information about the anchorage perspective (i.e., toward the speaker).

### 3.4.4 Dynamic movement versus static setting

Slobin (1996a) suggests that both Spanish and English narrators of *frog stories* seem to “tell the same story” (p. 205) despite the fact that Spanish narrators, in comparison with English narrators, use a smaller set of motion verb, mention fewer ground elements in individual clauses, and describe fewer segments of a motion event. These differences seem to be inversely correlated to the degree of narrative attention to movement (actions) and setting (results/states). Specifically, English speakers tend to devote more narrative attention to the dynamics of movement, presumably due to the “availability of verbs of motion (often conflated with manner) that can readily be associated with satellites and locative prepositional phrases to trace out detailed paths in relation to ground elements” (p. 205). By contrast, Spanish speakers tend to focus more on the static description of the physical setting in which the action takes place.
Slobin (1996a) points out that while such static description of physical settings are abundant in Spanish frog stories, they are rare in English frog stories. In the descriptions of the deer scene none of the English narrators provide a locative elaboration for this scene, while 25% of Spanish adult speakers did so. As results from the present study show, 17% of adult Chinese narrators did so.

This pattern seems to be what we would expect. Since both Chinese narrators and Spanish narrators make sparse references to ground elements (which are integral components of the path), we would expect that Chinese narrators would also resort to descriptions of physical settings to compensate for their minimal use of plus-ground clauses. Meanwhile, since Chinese narrators, in contrast to Spanish narrators, tend to use a sequence of separate action clauses to trace out the trajectories of movement, Chinese narrators might be less likely to provide descriptions of settings than Spanish narrators are.

Chinese speakers and Spanish speakers are more likely to attend to description of physical settings than English speakers. The rich means for path description in English allow its speakers to leave setting to be inferred, whereas the sparser path possibilities in Spanish are compensated for by the elaborated descriptions of settings. The individual verbs in Chinese cannot accumulate path expressions as freely as those in English, but several path verbs can occur in a sequence in a single clause. Chinese speakers will then sometimes resort to descriptions of physical settings, and leave some path information to be inferred from the discourse context.

To summarize the discussion, the language-specific patterns are quite pervasive in each of the three languages under discussion. Thus manner-verb-of-motion + satellite(s)
combinations are typical of satellite-framed constructions in English, verbs of inherent
directionality are typical of verb-framed constructions in Spanish, and the serial verb
constructions are typical of equipollently-framed constructions in Chinese. These
differences, together with other language-specific properties and constraints, engender
differences in the description of motion events in connected discourse.

3.5 Summary and conclusions

This chapter examined motion event descriptions in spoken narrative data elicited
from Chinese speakers of five age groups (3, 4, 5, 9 year olds, and adults) using the
wordless picture storybook Frog, where are you? (Mayer, 1969). Results suggest that
Chinese speakers (i) use a great variety of motion verbs, particularly manner-of-motion
verbs, (ii) provide limited description of ground elements, (iii) break a scene into several
segments and mention segment by segment what takes place in the scene, and (iv)
provide some descriptions of the physical settings in which movement takes place. The
results are summarized in Table 6 by juxtaposing the structural and discourse patterns of
motion event descriptions in the satellite-framed language English, the verb-framed
language Spanish, and the equipollently-framed language Chinese. When compared with
data in Spanish and English, the results from the present study reveal a mixed pattern of
talking about motion events in connected spoken discourse by Chinese speakers. Chinese
speakers talk about motion events in a way that is consistent with the hypothesis that
Chinese is an equipollently-framed language, rather than a verb-framed or satellite-
framed language.
The structural and discourse patterns typical of motion event descriptions in Chinese were also observed in another serial verb language in a recent study of motion event descriptions in Tai by Zlatev and Yangklang (2004). Tai, like Chinese, encodes both the manner and the path components of a motion event within two separate verbs occurring in an uninterrupted sequence. Similarly, Tai speakers in the study of Zlatev and Yangklang (2004) exhibited hybrid patterns in their descriptions of motion events in *frog stories*. On the one hand, Tai speakers behaved like speakers of satellite-framed languages in their frequent use of manner-of-motion verbs and in their tendency to describe a complex event via multiple individual action clauses that analyze the event into its components. On the other hand, Tai speakers behaved like speakers of verb-

<table>
<thead>
<tr>
<th></th>
<th>English</th>
<th>Chinese</th>
<th>Spanish</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Satellite-framed</td>
<td>Equipollently-framed</td>
<td>Verb-framed</td>
</tr>
<tr>
<td><strong>Motion verb lexicon</strong></td>
<td>LARGE</td>
<td>LARGE</td>
<td></td>
</tr>
<tr>
<td><strong>Manner-of-motion verb use</strong></td>
<td>FREQUENT</td>
<td>FREQUENT</td>
<td></td>
</tr>
<tr>
<td><strong>Descriptions of a complex event via multiple action clauses</strong></td>
<td>YES</td>
<td>YES</td>
<td></td>
</tr>
<tr>
<td><strong>Elaborated ground descriptions</strong></td>
<td>LIMITED</td>
<td>LIMITED</td>
<td></td>
</tr>
<tr>
<td><strong>Descriptions of physical settings</strong></td>
<td>YES</td>
<td>YES</td>
<td></td>
</tr>
</tbody>
</table>
framed languages in their tendency to provide descriptions of the physical setting in which movement takes place, and to limit their descriptions of the ground to one piece of information (either the goal, or the source, or the medium of the movement). The mixed patterns of motion event descriptions in Chinese and Tai, and possibly in other serial verb languages, strongly suggest the validity of adding *equipollently-framed* languages to Talmy’s binary typology of *verb-framed* versus *satellite-framed* languages. At least this is true with respect to the elaboration of semantic components of motion events in narrative discourse.

These results from the analysis of elicited narrations of the *frog story* in Chinese set the stage for the analysis of motion event descriptions in fictional written narratives in Chinese that follows in the next chapter. The question there is whether the habitual patterns of motion event descriptions in a particular language as found in elicited narratives will also be found in written fictional narratives.
CHAPTER 4 MOTION EVENTS IN CHINESE NOVELS

4.0 Introduction

Talmy (1985, 2000) has proposed a dichotomous typology between verb-framed languages and satellite-framed languages based on the dominant pattern in which the path component of a motion event is lexicalized. Verb-framed languages (e.g., Spanish) typically encode path in the verb root, whereas satellite-framed languages (e.g., English) typically express the path in satellite elements associated with the verb root.

Crosslinguistic studies of narrative discourse have repeatedly found that speakers of these two types of languages talk about motion events in distinct ways. Slobin (2004) has revised Talmy’s two-way typology, adding a third type of what he calls equipollently-framed languages (e.g., Chinese).

The study of elicited spoken narratives has shown that when asked to tell a “frog story” from a wordless picture book, Chinese speakers talk about motion events in a way that is different from both Spanish and English speakers. On the one hand, Chinese speakers pattern with English speakers in their use of verbs to express manner of movement and in their tendency to break up a scene into more narrative segments. On the other hand, Chinese speakers pattern with Spanish speakers in their tendency to provide limited information about the trajectories of movement, but relatively rich static descriptions of the physical setting in which actions takes place. The elicited spoken narrative data lead to the contention that speakers of Chinese construct motion event descriptions in connected discourse in a way that generally shows it to be neither a satellite-framed language like English, nor a verb-framed language like Spanish, but an equipollently-framed language.
The elicited spoken narrative data also provide some support for the effects of patterns of language structure on patterns of language use. However, speakers in the context of spontaneous oral narration may be constrained by the online time pressure of speaking as well as the pictorial events depicted in the wordless storybook itself. The results obtained from the elicited spoken narratives may therefore be an artifact of the content and nature of the artificial task. Since all languages have the necessary grammatical devices and linguistic resources to encode all the semantic components of a motion event, it is possible in theory that speakers of any given language, if they were given sufficient time and were allowed to be as expressive as they want to be, might relate the same event or sequence of events with the same degree of elaboration.

For this reason, Dr. Slobin and his colleagues at University of California at Berkeley have looked at novels written in languages of both satellite-framed and verb-framed language types in order to see whether the differences that have shown up in the elicited spoken narratives (i.e., frog stories) are also present in the narration of motion events in fictional written narratives produced by professional writers. The fact is that “the fiction-writers, unlike the frog-narrators, are not constrained by a common set of events to narrate” (Slobin, 1996a, p. 208). They don’t have “the online time pressure of speaking,” and are “free to be as expressive as they please” (Slobin, 2000, p. 115).

Preliminary results suggest that the discourse typology is oblivious of genre differences, and is also independent of language family. Slobin (1996a), for example, compared references to ground objects in the motion event descriptions in five Spanish and five English novels. He found that in comparison to Spanish novelists, English novelists mentioned more ground objects per clause (96% versus 81%), and they tended
to mention a larger number of elements referring to the ground too. Slobin (2000) reported a study comparing the use of manner of motion verbs in seven novels from English, Russian, Spanish and Turkish. English and Russian are satellite-framed languages, and Spanish and Turkish are verb-framed languages. In comparison to the two verb-framed languages (i.e., Spanish and Turkish), the two satellite-framed languages (i.e., English and Russian) made more frequent use of manner of motion verbs which are also more diverse and expressive. Specifically, about half of the motion verbs that were used encoded some information about manner of movement in English and Russian novels, but fewer than one quarter of the verbs in Spanish and Turkish novels are manner verbs. While English novels contained 51 types of intransitive verbs of self-motion, Spanish and Turkish novels had only 23 and 15 respectively\(^{27}\). Slobin concluded that while manner-of-motion verbs are a salient aspect of novels in satellite-framed languages, they are not in verb-framed languages. This contrast found in novels between the two verb-framed languages and the two satellite-framed languages is essentially the same as what is found in oral frog stories, reflecting the typology of lexicalization patterns.

Oh (2003) also shows that manner-of-motion verbs are more heavily used in novels by writers of English (a satellite-framed language) than by those of Korean (a verb-framed language). Özçalışkan and Slobin (2003) examined the expression of manner of motion in novels in Turkish (a verb-framed language) and English (a satellite-framed language), and observed the same typological contrast in motion verb use. The nine novels written in English included more manner verbs (51% of all motion verbs) than the nine novels written in Turkish (30%). In comparison to English novels, Turkish

\(^{27}\) The number of types of intransitive verbs of self-motion in Russian novels is not available. For details, see Slobin (2000, pp. 115-119).
novels mainly relied on path verbs in describing motion events (59% versus 27%). In addition to the above contrast in the frequency of manner verb use, novels in these two languages also differ sharply in the diversity of manner verbs used (82 types in English versus 32 types in Turkish). When alternative means of conveying information about manner of movement were considered, it was found that “Turkish speakers use these means mainly to add manner information to basic motion event descriptions, apparently compensating for what they cannot easily encode at the level of motion verb constructions,” while “English speakers use such means predominantly to elaborate or augment the manner that has already been encoded by the verb” (p. 268). Professional writers of verb-framed languages therefore do not use alternative expressions of manner frequently enough to compensate for their less frequent use of manner verbs.

In this chapter, an attempt is made to examine how Chinese writers talk about motion events involving the movement of a character or characters from one place to another in creative fictions. The goal is to see whether the typological and discourse characteristics of motion event descriptions observed in oral narrative will also show up in written narrative in Chinese. Overall, the analyses suggest strongly that the mixed pattern of motion event descriptions observed in Chinese frog stories is also characteristic of the written narrative data I present here: While Chinese writers show the satellite-framed language tendency to encode more manner details, they also show the verb-framed language tendency to encode fewer path details.
4.1 Samples and procedures

The samples consist of descriptions of motion events in nine (9) novels written in Chinese by twentieth-century professional writers. The nine novels are listed as follows (author - publication date - title):

(73) The nine Chinese novels


Shānghāi de zăochén; Zhōu Libō (1948), Bàoēng zhòuyù

The selection of these novels was largely based on the availability of an electronic version of each of these from the Chinese e-book website: www.eshunet.com (see Appendix A). They were chosen from a larger pool, as there were not enough episodes of motion events in some other Chinese novels sampled. Twenty “episodes” were selected at random from each novel, where an episode is defined as “the movement of a major protagonist, beginning from a stationary position and continuing to move until arriving at another stationary position where a plot-advancing event occurs” (Öçalişkan & Slobin, 28)

28 These other Chinese novels seem to have the flavor of Spanish novels. Slobin (1996a) notes that it is often difficult to find any descriptions of motion events in a Spanish novel, which is hardly the case for English novels. The novels he sampled left him with the impression that “the English writers are quite concerned with moving their characters from place to place, whereas the characters in the Spanish novels often simply appear at a new place” (Slobin, 1996a, p. 207). Of course, writers of different languages might not differ with respect to their concern with the movement of the protagonist. Oh (2003) suggests that we consider crosslinguistic differences in how writers prefer to express movement from one place to another explicitly or implicitly. These other Chinese novels suggest that we might be dealing with individual variations.
For the sake of simplicity, a sample episode in English is presented in (74) below (Slobin, 1996, p. 208).

(74) I went through the hall and up the great stairs, I turned in under the archway by the gallery, I passed through the door to the west wing, and so along the dark silent corridor to Rebecca’s room. I turned the handle of the door and went inside. (Daphne Du Maurier, 1938, Rebecca, p. 225)

Each of the 180 episodes (20 × 9 =180) was further coded for motion event descriptions. The number of motion event descriptions varies from episode to episode, and there are a total of 480 examples of motion event descriptions in the 180 episodes. The analysis focuses on the expression of manner, path, and ground in written narratives. As a consequence, the categories included in the analysis were (i) motion verb use, (ii) descriptions of ground elements, and (iii) alternative manner expressions.

**Motion verb use**

All the verbs that are used in the motion event descriptions were identified. A distinction was first made between motion verbs (e.g., pāo “run”) and verbs of general actions (e.g., nòng “make”). With the motion verbs identified, a distinction was then made between manner-of-motion verbs expressing manner information, deictic path

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29 The selection of motion event episodes largely follows the procedure described in Slobin (1996a, p.207). “Simple appearances and disappearances from the scene were excluded, as were nondirectional paths (e.g., turning around, pacing up and down). Motion events can be either a simple trajectory or a journey. The only criterion was thus that the protagonist ended up in a different place within an uninterrupted stretch of a narrative. My procedure was to open a book at random and read until finding a motion event, collecting twenty such events from each novel.”
verbs indicating whether the movement is toward or away from the speaker (lái “come,” and qù “go”), and non-deictic path verbs encoding the path component of a motion event.

**Ground phrases**

The expressions indicating the source, medium, and goal of movement were identified. These include those associated with some verbal elements in an individual clause, and those descriptions of the scene which allow one to infer the source, medium, or goal of movement.

**Alternative manner expressions**

These include all expressions expressing manner in *alternative* ways other than manner-of-motion verbs. They can be adverbials, adjectives, phrases, clauses, or sentences providing information about manner of movement. They can also be descriptions of the “internal state or physical condition of a moving entity,” or “features of the physical setting that could influence manner of motion” (Özçalışkan & Slobin, 2003, p. 265).

### 4.2 Results

**4.2.1 Verbs of motion**

Analysis at the level of motion verb use suggests a similar pattern in *elicited spoken narrative* and *fictional written narrative*. First, these professional writers used a large collection of manner-of-motion verbs (35 types). The list of all manner-of-motion verbs used in the Chinese novels are presented below.
(75) The entire collection of manner-of-motion verbs used in the nine Chinese novels
bēn “rush,” bùxíng “walk on foot,” chōng “dash,” cuān “cross,”
“kick,” zhǔǐ “chase”

Özçalıshkan & Slobin (2003) examined manner-of-motion verb use in nine novels
in English (a satellite-framed language) and nine novels in Turkish (a verb-framed
language). They found that novels in English contained a manner-of-motion verb lexicon
almost twice as varied (64 types) as Turkish novels (26 types). The 35 types of manner-
of-motion verbs in Chinese novels cannot compete with the 64 types of manner-of-
motion verbs in English novels. However, when we consider the use of serial verb
constructions, the encoding of manner is really a salient feature in Chinese novels that
makes them similar to English novels, and different from Turkish novels. Chinese
professional writers used a large collection of serial verb constructions in which the first
verb slot is occupied by a manner-of-motion verb (303/480=63). If we include the 34
examples of motion event descriptions which use a manner-of-motion verb alone, the
percentage of motion event descriptions with a manner-of-motion verb will be even
higher (70%).
4.2.2 Description of ground elements

Like the Chinese narrators of *frog stories*, Chinese professional writers tend to make sparse references to ground elements in individual clauses. As shown in Table 7, a ground element is mentioned in 85% of motion events in Chinese novels, whereas a previous study on motion event descriptions in five English novels show that 96% of such descriptions are plus-ground clauses (Slobin, 1996a).

Table 7 Percentage of minus-ground and plus-ground clauses in novels

<table>
<thead>
<tr>
<th></th>
<th>Minus-ground clauses</th>
<th>Plus-ground clauses</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4</td>
<td>96</td>
</tr>
<tr>
<td>Spanish</td>
<td>19</td>
<td>81</td>
</tr>
<tr>
<td>Chinese</td>
<td>15</td>
<td>85</td>
</tr>
</tbody>
</table>

The numbers in Table 7 tell us that Chinese novelists tend to pattern with Spanish novelists in their tendency to mention less ground objects than English novelists. This tendency is also obvious when we consider the number of elements referring to ground (see Table 8).

Table 8 Percentages of motion events with ground references in Chinese novels

<table>
<thead>
<tr>
<th>Languages</th>
<th>Number of ground elements referred to</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
</tr>
<tr>
<td>English</td>
<td>4</td>
</tr>
<tr>
<td>Spanish</td>
<td>19</td>
</tr>
<tr>
<td>Chinese</td>
<td>15</td>
</tr>
</tbody>
</table>
Furthermore, Table 8 shows that when a Chinese novelist does provide information about the source, goal or medium of movement, they will tend to limit themselves to one piece of information. In this respect, Chinese novelists are closer to Spanish novelists than to English novelists who “rarely move their protagonists without mentioning some ground object relative to the path” (Slobin, 1996a, p. 207). Therefore, with respect to references to ground elements, the patterns in written narratives are exactly the same as those we have found in elicited spoken narratives. Specifically, “the novels, like the frog stories, show English narrations to be richer in encoding path details – both per verb and per motion events” (Slobin, 1996a, p. 208).

In the previous chapter, Chinese narrators of frog stories were found to compensate for their sparse references to ground elements in individual clauses by means of a series of action clauses as well as rich descriptions of the setting in which movement takes place. This tendency is also manifested in Chinese novels. Consider first the use of action clauses in the following example with the serial verb constructions underlined:

(76) Tā pá-shàng qiángtōu,
he climb-ascend fence
liándíèdàigūn, tiào-jìn yuàn qiáng wàimiàn shuǐhào lǐ,
tumble-and-fumble jump-enter courtyard fence outside waterhole in
yòu máng pá-qí-lái, chuān-guò yúshù cóng-zi,
again hasten climb-rise-come, penetrate-pass elm jungle
zuān-jìn yī-jīa càiyuàn-zi lǐ, tà-zhe guānmàn hé dòumiáo,
dig-enter one-CL vegetable-garden in, tread-ZHE melon-vine and sprout
“He climbed onto the fence. Tumbling and fumbling, he jumped into a waterhole outside the courtyard. He hastened to climbed up. [He] passed a pile of elm trees, and entered a vegetable garden. Treading on the melon vine and bean sprout, from the spacing between the willow barrier, he ran toward Long-neck Han’s house.”

A comparison between the narration in Chinese (76) and the narration in English (74) suggests a difference in how the Chinese writer and the English writer deal with trajectories of movement. In the English example, four ground elements, namely, *the door, the west wing, the dark silent corridor, and Rebecca’s room*, are appended to a single verb *pass* to provide the information about the path that was followed by the protagonist in a compact way. By contrast, each type of change of location is spread out in a ground element associated with a different serial verb construction in the Chinese example.

The use of scene setting to trace out different ground elements is also a salient feature of motion event descriptions in Chinese novels. Example (77) is typical.

(77)  
*Cóng yiàodiàn hòumén chū-lái,*  
from  drugstore backdoor exit-come  
*Yī-tiáotiáo zhěngjié-de xiǎo hútóng lǐ xìngrén xīshāo.*  
One-CL tidy-DE small bystreet in pedestrian sparse
“(I) came out of the drugstore through the backdoor. There were very few people on the small and tidy bystreets. The sunshine sprinkles on the ridge of the componds with houses around the courtyard. The air is dry and cold. I was very pleased that I got to know the name of the woman.”

The underlined description in (77) provides the information about the goal of movement. One can infer that the protagonist exited the drug store and entered one of the bystreets. There is another interesting way to mention ground elements. Consider (78).

(78) Tā zǒu-chū fāngjiān.

she walk-exit room

Wǒ tīng-dào tā dǎ-kāi lǐngyǐjiān wòshì-de mén-suō.

I listen-arrive she beat-open another bedroom-DE door-lock

Jiēzhe yī xiǎng, sīzhǒu yòu huīfū yī-piàn jìjìng.

then one sound around again resume one-piece quiet

30 Sìhéyuàn is a compond with houses around the courtyard.
“She walked out of the room. I heard her open the lock of another bedroom. I heard one sound, and the world went back to complete silence.”

The underlined parts in (78) tell us that she walked out of one room, and went into another. However, this information is conveyed through the ear of someone other than the character that undergoes the movement.

### 4.2.3 Alternative manner expressions

In their examination of motion event descriptions in each of the nine novels in Turkish (a verb-framed language) and English (a satellite-framed language), Özcalışkan and Slobin (2003) found that both Turkish and English writers make frequent use of alternative manner expressions. The same is the case for Chinese writers. Table 9 provides a comparison between English, Turkish, and Chinese novels with regard to the use of alternative means for expressing manner of movement.

<table>
<thead>
<tr>
<th></th>
<th>English</th>
<th>Turkish</th>
<th>Chinese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adverbials</td>
<td>73</td>
<td>93</td>
<td>98</td>
</tr>
<tr>
<td>Descriptions</td>
<td>34</td>
<td>20</td>
<td>4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>107</td>
<td>113</td>
<td>102</td>
</tr>
</tbody>
</table>

Özcalışkan and Slobin (2003) observed that these alternative expressions served different functions in English and Turkish novels. In English, such expressions of manner were more likely to accompany manner verbs, whereas in Turkish they were more likely

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31 Results for English and Turkish were drawn from Özcalışkan and Slobin (2003, p. 266).
to qualify non-manner verbs. Like English writers, but in contrast to Turkish writers, Chinese writers use these alternative manner expressions almost exclusively to accompany manner-of-motion verbs. However, Chinese writers also differ from English writers in one important respect. While English writers use the alternative manner expression to augment or extend the specification of manner of movement provided by the fine-grained manner-of-motion verbs, Chinese writers use them to compensate for their use of more general (or first-tier) manner-of-motion verbs.

As pointed out in the previous chapter on frog stories, Chinese narrators do not make as fine distinction within a particular domain of manner of movement as English narrators do. There is a similar pattern in the Chinese novels. For example, to describe the manner of walking, Chinese writers typically use the verb зǒu “walk” which is very general in meaning and occasionally use dú “walk slowly” and mài “stride,” while English writers use a dozen verbs with fine distinctions to express the same motion. Özçalışkan & Slobin (2003, p. 263) provide the following list.

(79) Verbs of manner-of-walking in nine English novels

walk, drift, loiter, march, pace, plod, rustle, shuffle, sift, skitter, sneak, stride, tiptoe, tramp, tread, wade, weave

Chinese writers resort to a separate expression that complements the information about manner of movement provided by the verb. In the motion event descriptions sampled in the nine Chinese novels, four different kinds of such expressions were found to accompany the verb зǒu “walk.” These include adverbs and adjectives in (80), adverbial phrases in (81), separate clauses like (82), and descriptions (83).
(80) Adverbs and adjectives

*kuàibù zǒu* “walk with quick steps,” *dàbù zǒu* “walk with big stride,” *mànmàn zǒu* “walk slowly,” *yīguài yīguài-de zǒu* “walk with a limp,” *xìngbù zǒu* “walk aimlessly,” *cōngcōng-de zǒu* “walk hastily,” *mòmò-de zǒu* “walk quietly,” *jījī-de zǒu* “walk hastily,” *mōsuō-zhe zǒu* “walk gropingly,” *mànwúmòdi-de zǒu* “walk aimlessly,” *dànzhàn xǐn jīng-de zǒu* “walk with tremble from fear,” *dàtābù zǒu* “walk with big stride”

(81) Adverbial phrases

*Tā yǐ jījī xùnsù mínjìe de bùfá, pīlī shǎndiàn bān de zǒu-le guò-lái.*

He use very rapid swift DE step firebolt lightning like DE walk-LE-pass-come

“He walked over with very rapid and swift steps, like thunderbolts and lightning.”

(82) Separate clauses

*Wǒ méi pāobù, dàn zǒu-de hěn kuài, zǒu-jìn bàngōngshì.*

I not run but walk-DE very fast walk-enter office

“I didn’t run, but walked very fast. (I) walked into the office.”

(83) Descriptions

*Shāngyuánměn yě zhēngzhá-zhe zhàn-qī-lái,*

the-wounded also struggle-ZHE stand-rise-come

*hùxiāng chānfū-zhe, yīguài yīguài-de zǒu-zhe.*

each-other hold-ZHE limp-DE walk-ZHE

*Zài tāměn zǒu-guō-de dīfāng, sā-zhe bānbān xuējī.*

at they walk-pass-DE place drop-ZHE full-of bloodstain
“The wounded also struggled to stand up, holding each other and walking with a limp. The places they walked by were filled with bloodstains.”

Example (83) provides description of the physical condition of the moving entities, the wounded, and description of the physical setting, full of bloodstains at the places they walked by, allowing one to infer the manner of movement. Like other alternative manner expressions, they all provide some kind of compensation for the coarse distinctions made in certain semantic domains of manner of movement.

4.3 Summary and conclusions

The analysis of motion event descriptions in Chinese novels suggests that Chinese professional writers deal with motion events in a way that is characteristic of the Chinese narrators of frog stories, in spite of the fact that writers have “a maximum amount of freedom, skills, and time to utilize all the possible means to express what they intend to express” (Oh, 2003, p. 68). This was seen in four ways. First, Chinese writers encoded manner of motion at a high rate by frequent and diverse uses of serial verb constructions where the first verb slot is occupied by a manner-of-motion verb. Second, Chinese writers did not make fine-grained distinctions within the domain of manner-of-motion, and they tended to use adverbial expressions to supplement the encoding of manner details. Third, Chinese writers made sparse references to ground elements in individual clauses, leaving the trajectories of movement to a sequence of serial verb constructions each with its own ground element or to inference from the context. Finally, Chinese writers tended to break a complex path into several segments, and to present them by
means of a series of action clauses. These results suggest that the link between patterns of language structure and patterns of language use is unaffected by genre (written versus spoken) and the task differences that arise across the genres compared (spontaneous oral narration versus creative fiction writing). In describing motion events in fictional writings, Chinese writers do not pattern with writers of satellite-framed languages such as English, nor with writers of verb-framed languages such as Spanish and Turkish. Rather, in their description of motion events in connected fictional discourse, as constrained by the structural and typological characteristics of their native language, Chinese writers follow equipollently-framed “habitual patterns of language use” (Slobin, 2004, p. 253).

Ideally, a more robust method would compare motion event descriptions in novels written in English, Spanish, and Chinese along with their translations into each of the other languages. Such a method, which Oh (2003) has applied in English and Korean, would allow one to see more clearly the effects of structural and typological characteristics on the habitual patterns of motion event descriptions by speakers of these three languages.
5.0 Introduction

Some languages prefer to encode path of movement in a verb (e.g., *enter*), others in an associated satellite to the verb (e.g., *out in come out*). Talmy (1985, 2000) refers to the former as *verb-framed* languages, and the latter as *satellite-framed* languages respectively. Yet in some other languages, path of movement is typically encoded in one of the verbs that form a serial verb construction. Slobin (2004) refers to them as *equipollently-framed* languages because the verbs in a serial verb construction are considered of equal grammatical status. Example (84) illustrates the construction types associated with motion events in these three typologically different languages.

(84) a. *verb-framed construction type*

\[
\begin{array}{c}
\text{[motion + path]} & \text{ground} & \text{manner} \\
\text{verb}^{\text{finite}} & \text{noun} & \text{verb}^{\text{nonfinite}}
\end{array}
\]

b. *satellite-framed construction type*

\[
\begin{array}{c}
\text{[motion + manner]} & \text{path} & \text{ground} \\
\text{verb}^{\text{finite}} & \text{satellite} & \text{noun}
\end{array}
\]

c. *equipollently-framed construction type*

\[
\begin{array}{c}
\text{[motion + manner]} & \text{[motion + path]} & \text{ground} \\
\text{verb}^{\text{finite}} & \text{verb}^{\text{finite}} & \text{noun}
\end{array}
\]
In both oral descriptions of motion events elicited from naïve speakers using a wordless picture storybook (Chapter 3) and written descriptions of motion events in creative fictions by professional writers (Chapter 4), Chinese exhibited characteristics that have been associated with, and/or expected from both satellite-framed languages such as English and verb-framed languages such as Spanish. On the one hand, Chinese speakers differ from Spanish speakers, but pattern with English speakers, in their heavy use of a rich repertoire of motion verbs (particularly manner-of-motion verbs), and their tendency to break a complex motion event into several components and describe them one by one by means of a series of separate action clauses. On the other hand, Chinese speakers differ from English speakers, but pattern with Spanish speakers, in their sparse references to ground elements in individual clauses and relatively rich descriptions of the physical settings in which movement takes place. Taken together, the habitual patterns of motion event descriptions in discourse by Chinese speakers are consistent with the characterization of Chinese as belonging to the class of *equipollently-framed* languages.

Children of individual languages, of course, must learn such patterns of language structure and patterns of language use. They need to learn how the semantic components of a motion event are mapped onto surface linguistic forms, and vice versa. They need also learn the language specific and typologically distinct constructions associated with motion events. There is also a need to learn the pragmatics of what must be expressed and what can be left to inference. For example, children need to figure out when they must express manner of movement (e.g., in those contexts where attention to manner is salient or foregrounded), and when it is more appropriate to leave out the manner
information. Learning to express motion events thus involves learning the language-specific characteristics at the level of lexicon, grammar, and discourse.

A number of studies have explored the expression of motion events in early child language (Berman & Slobin, 1994; Bowerman & Choi, 2001; Choi & Bowerman, 1991). Rich in language commonalities and variations, motion events offer a unique arena within which various hypotheses concerning the learning of language-specific patterns of language structure and language use can be examined. Two competing hypotheses figure prominently in the literature. According to the universal hypothesis (Slobin, 1985), children start with some universal default, and they fit the native language input to their own tendencies in processing and producing language. Only after continued exposure are they able to follow the language-specific patterns of the target language. According to the language specific hypothesis (Choi & Bowerman, 1991; Bowerman & Choi, 2001), children follow language-specific patterns from their earliest speech.

Previous research showing the early emergence of language-specific characteristics of motion event descriptions provides some support for the language-specific hypothesis. For example, the construction type in the form of manner-of-motion verb + satellite combinations has been found “highly salient and readily accessible to English speaking children from early on in their development of language structure and language use” (Berman & Slobin, 1994, p. 161). Children also seem to be tuned to the semantic patterns of their native language from early ages on. Children learning satellite-framed languages produce more manner verbs than children learning verb-framed languages as early as 3 years of age (Berman & Slobin, 1994; Slobin, 2000) or perhaps even earlier (Choi & Bowerman, 1991). Children learning satellite-framed languages not
only made more frequent use of manner-of-motion verbs, but produced a more diverse and fine-grained manner-of-motion verb lexicon than children learning verb-framed languages at least as early as 3 years of age (Özçalışkan & Slobin, 1999; Oh, 2003). The patterning achieved early by children seems to be the same as that seen later in adults, suggesting the language-specific patterns from early on.

Two recent studies (Allen et al., 2003; Oh, 2003) on the development of motion event descriptions by 3-year-old children learning a verb-framed language (Turkish or Korean) and a satellite-framed language (English) suggest, however, that the universal hypothesis and the language-specific hypothesis may not be mutually incompatible. In these studies, English and Turkish 3-year-olds and adults (Allen et al., 2003) and English and Korean 3-year-olds and adults (Oh, 2003) were asked to describe motion events with simultaneous path and manner (e.g., ROLL + ASCEND) components as depicted in video clips. Turkish and Korean typically represent these events within two separate clauses using the construction type in (84a), whereas English typically represents them within one clause using the construction type in (84b).

Children’s production reflected the target adult model in some aspects of motion event descriptions, which is consistent with the language-specific hypothesis. Allen et al. (2003) found that Turkish-speaking children predominantly use the verb-framed construction type (84a) in which manner and path are expressed in two verbal elements in one sentence, whereas English-speaking children predominantly use the satellite-framed construction type (84b). Oh (2003) found that in comparison with Korean children,

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32 Jill Hohenstein (2001) has found that by age 7, American and Mexican children differ in the relative verbal attention they pay to path and manner of movement in two different kinds of experimental tasks.
English children (i) produce significantly more manner verbs and significantly less path verbs, and (ii) produce descriptions expressing both manner and path more frequently.

In some other aspects, however, children departed from the target language-specific adult model and converged in their production of motion event descriptions. Allen et al. (2003) reported that both English and Turkish 3-year-olds produced more clauses with only either manner or path represented than the respective adult groups, while Oh (2003) reported that neither Korean children nor English children tended to express manner and path simultaneously in their descriptions. These children seemed to simplify or restructure the input language along universal lines of child grammar formation (Slobin, 1985), supporting the universal hypothesis.

These studies on children learning to express motion events in satellite-framed languages and verb-framed languages revealed both crosslinguistic parallels and language-specific tendencies in development. Consequently, they suggest that different types of languages pose different types of acquisition problems. The study of the development of typologically distinct languages not only reveals uniformities, but also the influence of language-specific properties on the course of development. An interesting question that consequently arises involves the course of development in children learning an equipollentely-framed language such as Chinese. Will motion event descriptions produced by Chinese children resemble those of a satellite-framed language, or a verb-framed language, or an equipollentely-framed language? The language specific hypothesis would predict an equipollentely-framed pattern from early on, while the universal hypothesis would predict initial uniformities of development across children learning the three different types of languages.
To address these issues, this chapter examines the development of motion event descriptions in Chinese-speaking children. Motion event descriptions in oral narratives elicited from 3-, 4-, 5-, and 9-year-old children using Mayer’s (1969) wordless picture story book *Frog, where are you?* (Mayer, 1969) are analyzed, and are compared with adult data as well as with comparable data in English and Spanish. We focus on path, ground and manner of movement, which constitute the three major dimensions of typological variation. The guiding question is how language-specific characteristics are reflected in motion event descriptions by children learning Chinese at different ages.

5.1 Sample and procedures

Motion event descriptions in an existing data corpus of Chinese frog stories elicited from children aged 3, 4, 5, 9, and adults using the wordless picture storybook *Frog, where are you?* were examined. The number of subjects in each age group was 12, except for the 3-year-old group which only had 11 children.

The motion event descriptions were marked and coded for each frog story. Each motion event description coded expressed a single event, and took the form of a clause containing either one single verb (*lái* “come”), or several verbs in a serial verb construction (*pǎo-chū-qù* “run-exit-go”).

First, all verbs in the motion event descriptions were identified, together with the associated ground elements (i.e., source, goal, or medium). Percentages of different types of motion verb use and different types of serial constructions were computed for each age group. Example (85) presents the different types of verbs included in the analysis.

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33 This section on “sample and procedures” was elaborated in Chapter 3. Some parts are repeated here for the sake of ease of presentation.
(85) a. **path verbs**

\[ V:p \text{ (non-deictic path verb)} = \text{jin} \text{ “enter”} \]

\[ V:i \text{ (deictic path verb)} = \text{lái} \text{ “come”} \]

b. **manner-of-motion verbs**

\[ V:m \text{ (intransitive manner-of-motion verb)} = \text{pǎo} \text{ “run”} \]

\[ VT:m \text{ (transitive manner-of-motion verb)} = \text{tuī} \text{ “push”} \]

c. **neutral verbs (non-motion activity verbs)**

\[ V:o \text{ (intransitive verbs that are not motion verbs)} = \text{wén} \text{ “smell”} \]

\[ VT:o \text{ (transitive verbs that are not motion verbs)} = \text{nòng} \text{ “make”} \]

(86) presents the different types of serial verb constructions included in the analysis\(^{34}\).

(86) **manner + path** (a transitive or intransitive manner-of-motion verb followed by a non-deictic path verb or a deictic path verb or both)

\begin{align*}
\text{pǎo-jìn-qù “run-enter-go”} & \quad \text{rēng-jìn-qù “throw-enter-go”} \\
\text{pǎo-dào “run-arrive”} & \quad \text{rēng-dào “throw-arrive”} \\
\text{pǎo-qù “run-go”} & \quad \text{rēng-qù “throw-go”}
\end{align*}

**path + path** (any possible path verb combination)

\begin{align*}
\text{chū-lái “exit-come”} \\
\text{lái-dào “come-arrive”} \\
\text{guǎi-guò-lái “turn-pass-come”}
\end{align*}

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\(^{34}\) For the sake of simplicity, if two path verbs follow another verb (manner-of-motion, or path, or neutral), the analysis treats the pattern as if there is only one path verb.
**neutral-path** (non-motion verbs followed by one or two path verbs)

*wēn-guò-qù* “smell-pass-go”

*jīng-chū-lái* “frighten-exit-come”

For the purpose of this study, the narrative segments as well as descriptions of physical setting in which movement takes place of one particular scene in the story, viz., *the deer scene*, were also identified for each *frog story*. The examination of these categories may enable us to see how Chinese children learn to compensate for the sparse descriptions of ground elements in individual clauses.

### 5.2 Results

#### 5.2.1 Learning to use motion verbs

The learning of motion verbs in Chinese can be examined in two ways: the development of a motion verb lexicon along with the use of different types of motion verbs (i.e., manner-of-motion verbs versus path verbs), and the development and use of different verb combinations (particularly *manner expressions* versus *path expressions*).

Table 10 summarizes the results concerning the development of different types of motion verbs as is reflected in *frog stories*. Chinese children do not seem to show any significant developmental difference in the amount of manner-of-motion verbs used in the *frog stories* until after 9 years of age. However, across age groups, the lexicon of manner-of-motion verbs is always larger than that of path verbs. In other words, there are more different types of manner-of-motion verbs than types of path verbs.
Table 10 The use of motion verbs in Chinese frog stories by age

<table>
<thead>
<tr>
<th>AGE</th>
<th>3yrs</th>
<th>4yrs</th>
<th>5yrs</th>
<th>9yrs</th>
<th>adults</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manner verbs (type)</td>
<td>18</td>
<td>21</td>
<td>16</td>
<td>25</td>
<td>37</td>
</tr>
<tr>
<td>Path verbs (type)</td>
<td>11</td>
<td>11</td>
<td>10</td>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td>TOTAL (type)</td>
<td>29</td>
<td>32</td>
<td>26</td>
<td>39</td>
<td>49</td>
</tr>
</tbody>
</table>

Figure 2, on the other hand, summarizes results about the development and use of manner expressions and path expressions in Chinese frog stories.

Three observations can be made from the results in Figure 2. First, the percentage of manner expressions is always higher than that of path expressions across age groups. This suggests Chinese children’s early development of a language-specific preference to describe a motion event with a manner expression, even though they have access to both

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35 Percentages were computed by dividing the total number of manner expressions and path expressions by the total number of motion event description in each age group.
manner expressions and path expressions. Second, there is no significant difference in the development of manner expressions (and accordingly path expressions) until after 9 years of age. Finally, path expressions produced by Chinese children at age 3 were more than twice as many as those produced by adults. This last observation concurs with the results from Allen et al. (2003) and Oh (2003) that Korean, English and Turkish children at age 3 produced more clauses with only either path or manner represented than the comparison group of adults. This may suggest that children at this age have more difficulty representing both manner and path of movement simultaneously in the same clause.

Overall, the examination of motion verb uses in Chinese frog stories revealed early emergence of language-specific predominance of manner expressions over path expressions in Chinese. This pattern is clearly shown in Figure 3, where the top two lines represent the gradual increase of the use of manner verbs alone or of manner expressions in general; whereas the two bottom lines represent the gradual decrease in the use of path verbs alone or of path expressions in general.

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36 Slobin (2004, p. 227) suggests that “there is a clear developmental trend” for Chinese children’s acquisition of serial verb constructions (manner-of-motion verb + path verb), based on an examination of how Chinese narrators of the frog story have described a scene involving the emergence of an owl from a tree. Whereas narrators of all ages used path verbs, manner-path combinations were never used by 3-year-olds, were used by 22% of children aged 4-7, and by 73% of 9-year-olds and adults. However, results from the present study examining all the motion event descriptions in the Chinese frog stories do not concur with Slobin’s (2004) above suggestions. Rather the present study shows that Chinese children follow the adult pattern (using manner-of-motion verb + path verb combinations) from as early as age 3.
5.2.2 The Development of ground descriptions

The labels in Figure 4 present the percentages of motion event descriptions which include one or more ground phrases in Chinese across ages.

Figure 4 suggests that as Chinese children in the present study grew older, they tended to make more frequent references to ground elements in individual clauses (but note the regression at the age of 4). There was a 9% increase from age 4 to age 5, and a 10% increase from age 5 to age 9, but there didn’t seem to be any further development from age 9 to adulthood. The overall tendency across age groups is to provide limited information about the ground of movement. These results suggest that Chinese children in the present study started to follow the language-specific structural pattern of mentioning few ground elements in individual clauses from very early on.
5.2.3 Developing the narrative habit of describing a complex event

The percentage of Chinese narrators who mentioned 3 or more segments out of the 6 event segments of the deer scene for each age group is presented in Figure 5.

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Figures 4 and 5: Percentages of plus-ground clauses in Chinese frog stories by age.

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37 Percentages were computed by dividing the total number of plus-ground clauses by the total number of motion event descriptions in frog stories of each age group.
The ability to break a complex event into several segments, and describe segment by segment what takes place in the event through a series of separate action clauses takes quite a long time to develop. Chinese children at age 3 are just starting to do that, and the development continues after 9 years of age. The developmental pattern shown in Figure 5 is reinforced by the pattern in Figure 6, which summarizes the average number of event segments described by children in each group. What we found is a steady increase in the mean number of event segments in the Chinese narrations of the deer scene.

![Figure 6. Mean number of segments mentioned for the deer scene in Chinese by age group](image)

5.2.4 The development of static descriptions of settings

Figure 7 summarizes the results about Chinese children’s development in providing descriptions of the physical setting in which the movement takes place.
Figure 7. Percentage of Chinese narrators providing descriptions of setting in the deer scene

The data in Figure 7 suggest that the ability to provide descriptions of the settings of motion events may take a long time to develop, and may be beyond the capacity of Chinese preschool children. Figure 7 also suggests some continued development from age 9 to adulthood in Chinese children’s ability to provide static descriptions.

5.3 Discussion

5.3.1 The development of equipollently-framed structural patterns

Results from the examination of how Chinese children learn to talk about motion events in connected discourse suggest an early emergence of the structural patterns. First, by the age of 3, Chinese children have developed structural aspects of *equipollently-framed* patterns of motion event descriptions that are characteristic of the target language. Specifically, they have established serial verb constructions with a manner-of-motion verb occupying the first verb slot (*pào-chū-lái* “run-exit-come”) as the dominant
construction type associated with motion events. The equipollently-framed construction type (84c) in Chinese is highly salient in adult speech, and readily accessible to children learning Chinese. Berman and Slobin (1994, 624) suggest that “if a linguistic form is highly accessible, its functional development may be accelerated.” After reviewing some empirical studies on the emergence of grammar, Tomasello (2000, p. 70) concluded that in the early stages children mostly use language the way they have heard adults using it and they develop an inventory of item-based utterance schemas. In the child’s experience, the frequent exposure together with practice of the same verb sequence (or serial verb construction) help the child to feel more comfortable and fluent with such a construction. In other words, such a verb sequence is entrenched through token frequency. On the other hand, the diversity and variety of verb combinations experienced by the child enable the creation of a “slot” in the item-based construction schemas. The type and token frequencies of the equipollently-framed construction type to which Chinese children are exposed, along with general learning mechanisms, result in early emergence of equipollently-framed structural patterns.

Second, starting from age 3, Chinese children in the present study tended to provide one piece of information about ground in a single clause. While this is an equipollently-framed structural pattern, it may not be language-specific. To see this point, let us consider the use of plus-ground clauses across different age groups in English, Chinese, and Spanish. Figure 8 summarizes the development of the ability to make references to ground elements in individual clauses in children learning English, Spanish, and Chinese.
Figure 8 suggests first that English and Spanish children are comparable until after age 4, whereas Chinese and Spanish start differently and converge by age 5. In spite of this difference, at the age of 3 and 4, children learning either English, or Spanish, or Chinese all tend to provide limited ground information in individual clauses. This suggests that the tendency of Chinese children to follow the adult pattern and provide limited information about ground in individual clauses may not be a language specific phenomenon, as it may follow from a universal constraints on the number of arguments (e.g., the number of ground elements) that these young children can handle at a time.\(^3^8\)

This finding is reminiscent of Peirce’s (1897) theory of adinity (i.e., the number of arguments associated with a given predicate) and consistent with the increasing

\(^{38}\) Berman and Slobin (1994, p. 163) resort to a cognitive constraint by suggesting that “the younger children encounter a genuine difficulty in relating both to the source and to the endpoint of movement even within the same conceptual frame.” Zheng and Goldin-Meadow (2002, p. 169), on the other hand, seem to favor a linguistic constraint when they say that sentences produced by young children “tend to be short and therefore can’t accommodate all of the elements in a motion event.”
complexity of structures of higher adinity per Oller (1996; Oller & Rascón, 1999; Oller, Chen, Oller, & Pan, 2005).

The type/token frequency may account for the early emergence of another language-specific structural pattern that is not necessarily characteristic of other equipollently-framed languages. This involves the development of the two deictic path verbs lái “come” or qù “go” which are pervasively utilized in the linguistic encoding of path in Chinese. Figure 9 strongly suggests that the Chinese children in this study starting from age 3 made frequent use of the two deictic path verbs lái “come” or qù “go” in their motion event descriptions, in spite of the fact that for unknown reason, they made more frequent uses of these two verbs than older children and adults did (64% versus 46%).

Since these two deictic path verbs typically occur in a serial verb construction, along with a manner-of-motion and a path verb, their early emergence is something we
should expect. As Tomasello (2000) points out, “[T]he accumulated linguistic experience undergoes processes of entrenchment, due to repeated uses of particular expressions across usage events, and abstraction, due to type variation in constituents of particular expressions across usage events” (p. 62).

5.3.2 The late development of equipollently-framed discourse patterns

Results from the examination of how Chinese children learn to talk about motion events in connected discourse suggest a late emergence of discourse patterns.

First, Chinese children haven’t established the narrative habit of breaking a complex event into several segments and describing them one by one via a sequence of separate action clauses until they are 9 years old. Chinese 3-year-olds perform at a level that is characteristic of speakers of verb-framed languages. This late development may not be a language-specific phenomenon, either. Children at this age are not usually able to fully perceive and conceptualize the events depicted in the wordless picture book, and they do not tend to provide many details in their stories. Second, Chinese children in the present study were not capable of providing static descriptions of the scene to help trace out the trajectories of movement until 9 years of age.

The late development of these discourse patterns suggests that the impact of grammatical typology requires about 9 years to take effect. Grammatical typology, furthermore, is only one of the multiple factors (linguistic, psycholinguistic, pragmatic, or even cultural) that give rise to typologically distinct habitual patterns of motion event descriptions.
5.3.3 The universal hypothesis versus the language specific hypothesis

The early emergence of serial verb constructions in which the first verb is occupied by a manner-of-motion verb as the predominant pattern for expressing motion events in Chinese provides some support for the language specific hypothesis (Bowerman & Choi, 2001). According to that hypothesis children follow language-specific patterns from their earliest speech. The late development of distinctive discourse characteristics across all three types of languages, however, provides some support for the universal hypothesis (Slobin, 1985). According to that hypothesis children start with some universal default, and only after additional exposure are they able to establish the language-specific pattern. For example, children under age 5, regardless of the target language, all seem to have difficulty in specifying both source and goal of movement in a single individual clause. For Spanish and Chinese children, this is less surprising because they are following the adult patterns to which they are exposed in their languages. For English children, this is not expected, because adult English speakers tend to attach several pieces of ground elements to a single verb as in, “The student ran into the classroom, past his classmates, toward the professor.” Children learning English thus seem to fit their production to a universal default, and the mismatch between themselves and adults seems to provide evidence for the universal hypothesis. In fact, not only is the specification of both source and goal within a single clause beyond the capacities of 3-year-old children in Spanish and English (Berman & Slobin, 1994), as well as in Chinese, these children also share a predominance of goal-marking clauses (e.g., “He ran into the classroom” where the classroom marks the goal of movement) in motion event descriptions. Figure 10 shows that 91% of the motion event descriptions produced by
Chinese 3-year-olds mentioned the goal (or destination) of movement. The same tendency is reported for Spanish and English 3-year-olds in Berman and Slobin (1994). Taken together, this is another piece of evidence for the universal hypothesis.

![Figure 10. The percentage of goal-marking clauses in Chinese frog stories by age](image)

5.4 Conclusions

This chapter investigated Chinese children’s learning to express motion events through an examination of motion event descriptions in frog stories produced by learners of Chinese at ages 3, 4, 5, and 9 years, and adults. At 3 years of age, Chinese children predominantly use manner + path serial verb constructions to express motion events, and they mention only one piece of information about ground of movement (either goal, source, or landmark of path) in individual clauses. However, the Chinese children in this study did not show any ability until after age 9 to describe the physical setting in which movement takes place, and they did not fully develop the narrative habit of describing a complex motion event by a series of individual action clauses that analyze the event into
its components. Chinese children’s performance in motion event descriptions has been found to grow gradually with increasing age, and adult performance is always more extensive than that of children at any age. These results suggest that while Chinese children follow equipollently-framed structural patterns when talking about motion events in *frog stories* from very early on, equipollently-framed discourse characteristics do not achieve maturity until adulthood.
CHAPTER 6 GENERAL CONCLUSIONS

The dissertation examined the structural and discourse characteristics of habitual descriptions of dynamic motion events in Chinese. It asked how these characteristics are reflected in motion event descriptions in discourse by children learning Chinese at different ages, as contrasted with Chinese-speaking adults. Contrasts with written productions by adults were also examined.

The linguistic analysis of motion events in Chinese (Chapter 2) suggests that in expressions of motion events in Chinese, verbs marking path of movement (jin “enter”) can either function alone or follow a verb marking manner of movement to form a serial verb construction. If expressions of motion events with a path verb alone are more characteristic than expressions with a serial verb construction, Chinese can readily be characterized as belonging to the class of verb-framed languages, where the path component of motion events is typically encoded in the main verb. If, on the other hand, expressions of motion events with a path verb alone are less characteristic than expressions with a serial verb construction, the place of Chinese in motion event typology depends on the grammatical status of verbs in serial verb constructions. There are three possibilities. If the path verb is the main verb as it always is when it occurs alone, Chinese would be characterized as a verb-framed language (Tai, 2003). If the manner verb is the main verb with the path verb as its satellite, then one would characterize Chinese as a satellite-framed language (Talmy, 1985, 2000). If, however, the two types of verbs are elements of equal force, one would characterize Chinese as an equipollently-framed language (Slobin, 2004). These controversies cannot be satisfactorily addressed at
the level of linguistic analysis, and require a detailed examination of language use in diverse contexts.

In both oral descriptions of motion events elicited from naïve speakers using a wordless picture storybook (Chapter 3) and written descriptions of motion events in creative fictions by professional writers (Chapter 4), Chinese exhibited characteristics that have been associated with, and/or expected from, both satellite-framed languages such as English and verb-framed languages such as Spanish. On the one hand, Chinese speakers differ from Spanish speakers, but pattern with English speakers, in their heavy use of a rich repertoire of motion verbs (particularly manner-of-motion verbs), and their tendency to break a complex motion event into several components and to describe them one by one by means of a series of separate action clauses. On the other hand, Chinese speakers differ from English speakers, but pattern with Spanish speakers, in their sparse references to ground elements in individual clauses and rich descriptions of the physical settings in which movement takes place. Taken together, the habitual patterns of motion event descriptions in discourse by Chinese speakers are consistent with the characterization of Chinese as an equipollently-framed language.

Oral descriptions of motion events elicited from Chinese speakers of different age groups reinforce the commonsense observation that children everywhere learn language gradually rather than abruptly (see e.g., MacWhinney, 1998, p. 201). At both the structural and discourse levels, children’s performance improves gradually with increasing age, and adult performance is always more extensive than that of children at any age. The developmental data also revealed different patterns in the development of structural versus discourse characteristics of motion event descriptions. While the most
basic structural (e.g., lexical and grammatical) characteristics of motion event
descriptions are already in place by the age of three (or even earlier), discourse
characteristics continue to develop in Chinese children throughout preschool and school
age. Chinese children do not automatically develop the richness of the most advanced
features of motion event descriptions at early stages of life, but continue to change over
time in their ability to express motion events in connected discourse. This dual patterning
of development cannot be accounted for solely by either the *universal hypothesis* (Slobin,
1985) or the *language-specific hypothesis* (Bowerman & Choi, 2001).


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APPENDIX A.

List of the Chinese Contemporary Novels Included in the Sample in Chapter 4.


ABSTRACT

The dissertation examined the structural and discourse characteristics of habitual descriptions of dynamic motion events in Chinese. It asked how these characteristics develop in children learning Chinese at different ages as contrasted with Chinese speaking adults. Contrasts with written productions by adults were also examined.

In expressions of motion events in Chinese, verbs marking path of movement (jin “enter”) can either function alone or follow a verb marking manner of movement to form a serial verb construction. The linguistic analysis (Chapter 2) suggests the need of detailed examination of language use in diverse contexts to address the controversy over whether Chinese is best characterized as a verb-framed (Tai, 2003), satellite-framed (Talmy, 1985, 2000), or equipollently-framed (Slobin, 2004) language.

Motion event descriptions in both elicited oral narratives (Chapter 3) and fictional written narratives (Chapter 4) in Chinese exhibited characteristics that have been associated with and/or expected from both satellite-framed languages such as English and verb-framed languages such as Spanish. These hybrid patterns of motion event descriptions in discourse support characterizing Chinese as an equipollently-framed language.

Equipollently-framed structural patterns of motion event description were found to emerge early in Chinese children (Chapter 5), while the richness of the most advanced features of motion event descriptions in connected discourse continues to develop throughout preschool and the school years.
These studies, on the whole, suggest a close link between patterns of language structure and patterns of language use, and point to the influence of such patterns on children’s development.
BIографical Sketch

Liang Chen was born on June 13, 1972 in Hunan, China. He was awarded a Bachelor of Arts degree in English Education from Hunan Norman University in July 1994, a Master of Arts degree in Linguistics and Applied Linguistics from Guangdong University of Foreign Studies in July 1999, and a Master of Arts degree in Theoretical Linguistics from the University of Connecticut in May 2002. Subsequently, he entered the Ph.D. program in Applied Language and Speech Sciences in the Department of Communicative Disorders at the University of Louisiana at Lafayette. Mr. Liang Chen is an elected member of the Honor Society of Phi Kappa Phi.