ELSEVIER

Motion events in Chinese novels: Evidence for an equipollently-framed language

Liang Chen [a,*], Jiansheng Guo [b]

[a] *University of Georgia, Communication Sciences and Special Education, 542 Aderhold Hall, Athens, GA 30605, United States*
[b] *California State University, East Bay, Department of Human Development, United States*

Abstract

Motion events typically involve an entity moving along a path in a certain manner. Research on language typology has identified three types of languages based on the characteristic expression of manner and path information. In satellite-framed languages, the main verb expresses information about manner of movement and a subordinate satellite element (e.g., a verb particle) to the verb conveys the path of movement. In verb-framed languages, the main verb expresses the core information of the path of movement, and the manner information is expressed in a subordinate structure (e.g., a gerundive). Both manner and path, however, are expressed by equivalent grammatical forms in equipollently-framed languages. In this paper, we explore the place of Mandarin Chinese in motion event typology through an examination of motion event descriptions in Chinese novels. We find that Chinese writers do not pattern their narrative descriptions of motion events as do writers of satellite-framed languages, nor as writers of verb-framed languages. Rather, Chinese writers follow unique habitual patterns of language use that lead to the contention that Chinese is an equipollently-framed language.
© 2008 Published by Elsevier B.V.

Keywords: Typology of motion events; Patterns of language use; Mandarin Chinese; Equipollently-framed

1. Introduction

Motion events, which typically involve an entity moving from one place to another, are among the earliest, most basic and pervasive events in our lives (Johnson, 1987). We move around the world every day, changing our perspective relative to people and objects around us, and from birth forward we experience the movement of ourselves and others.

Each language has many different means for talking about objects and their motion through space, but one of them is more characteristic than others. According to Talmy (2000:27), an expression of motion event is characteristic in a language if (1) it is *colloquial* in style, rather than literary or stilted; (2) it is *frequent* in occurrence in speech, rather than only occasional; and (3) it is *pervasive*, rather than limited—that is, a wide range of semantic notions are expressed in this type.

---

* Corresponding author.
   E-mail addresses: chen@uga.edu (L. Chen), jsh.guo@csueastbay.edu (J. Guo).

Research on typology of language has revealed that languages differ with respect to their characteristic expression of motion events. This paper examines the various ways of talking about motion events in actual language use in Mandarin Chinese in order to identify its characteristic expression of motion. By doing so, it offers a new type of evidence for the typological properties of the language.

2. The controversy over the place of Mandarin Chinese in motion event typology

By looking at characteristic expression of motion events, Talmy (1985, 1991, 2000) has proposed a two-way typology differentiating satellite-framed languages from verb-framed languages.[1] Satellite-framed languages (e.g., English) characteristically encode the path of movement in a satellite element such as a particle (e.g., *in*, *out*, *across*) subordinate to the main verb of a clause, whereas verb-framed languages (e.g., Spanish) characteristically encode the path in the main verb. This contrast may be illustrated by example (1) from Slobin (1997:438).

(1) English original   Spanish translation
     I ran <u>out</u> the kitchen door,   *<u>Salí</u> por la puerta de la cocina*
                                      "I <u>exited</u> [by] the kitchen door"
     <u>past</u> the animal pens,   *<u>pasé</u> por los corrales*
                                      "<u>passed</u> by the animal pens"
     <u>towards</u> Jasón's house.   *y <u>me dirigí</u> a casa de Jasón*
                                      "and <u>directed myself</u> to Jasón's house"

As shown in (1), while English employs a set of locative particles and prepositions (*out*, *past*, *towards*) to encode changes in location, Spanish typically makes use of a set of separate verbs (*salí*, *pasé*, *me dirigí*) instead.

Satellite-framed (and hence S-) languages and verb-framed (hence V-) languages also differ in their preferences for encoding the manner of movement. S-languages typically encode it as part of the main verb, and contain a rich lexicon of manner verbs (e.g., *crawl*, *creep*, *dash*, *dart*, *fly*, *jump*, *leap*, *limp*, *run*, *slip*, *splash*, *splat*, *stroll*, *throw*, *walk*). Therefore, an English speaker would most likely say *I ran out the kitchen door* as in (1), rather than (2) even though both are grammatical.

(2) I exited the kitchen door, **running**.

In contrast, V-languages contain fewer such manner verbs, and the manner information may be expressed in a separate lexical item from the main verb. For example, in the Spanish translation in (1), the main verb, *salí*, indicates that motion has occurred in a particular direction and information about manner of movement is omitted altogether. Although the translator might have encoded manner in the main verb (**corrí** por la puerta de la cocina "(I) ran through the door of the kitchen") or added a separate linguistic unit subordinate to the main verb such as the gerundive *corriendo* "running" in example (3) to indicate manner, such perfectly grammatical options are not characteristic of Spanish.

(3) Salí por la puerta de la cocina **corriendo**
     exit by the door   of the kitchen running
     "I exited the kitchen door, running."

Talmy's binary typology hinges on a single crucial criterion: does a given language preferentially express path (i.e., change of location) in the main verb (as in V-languages) or in satellite elements associated with the main verb (as

---

[1] Talmy's typological framework is not limited to motion events, but embraces a broader range of conceptual domains including the conceptual domain of aspect, change of state, action correlation, and event realization.

in S-languages)? Thus, the identification of the main verb in a clause is of utter importance. Such identification is relatively easy for languages such as English and Spanish where distinct morphological markings are present to differentiate the main verb from its supporting elements. In these languages, there is only one main verb slot in a clause, encoding either manner or path of motion. Consequently, in these languages, Talmy's system works well without much difficulty.

This system of identification becomes problematic when applied to Chinese, which has a pervasive serial verb construction that allows for at least two verb slots in a single clause: one for the manner verb, and the other for the path verb. There is no explicit morphological marking to indicate which one is the main verb. In fact, the two verbs form a closely-knit grammatical constituent that shares a common grammatical marking, such as aspect. The example in (4) consists of a serial verb construction in which the first verb (跑 *pǎo* "run") expresses manner of movement while path is expressed in the second verb (出 *chū* "exit"), and the perfective aspectual marker 了 *le* has the scope of both 跑 *pǎo* and 出 *chū*.

(4)   我跑出了厨房。
      Wǒ pǎo chū le   chúfáng.
      I   run   exit PFV kitchen
      "I ran out of the kitchen."

Thus, 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, Chinese should fall into Talmy's class of V-languages. If the path verb is a satellite element and the manner verb is the main verb, Chinese should be considered an S-language. These two different possibilities regarding the grammatical status of the path verb in the Chinese 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 to be the main verb, others such as Chao (1968), Li and Thompson (1981), and Chang (2001) regard it as a complement, or satellite in Talmy's (1991) terminology, to the preceding manner verb. Each group has made some observations and discovered some facts that are problematic to the other, and there is no sign of a settlement in the near future.

A third possibility, of course, exists; namely, that both verbs in a serial verb construction are of equal status. Such a schema acknowledges that there is no distinction between finite and non-finite forms of these verbs and each can be used independently without the other in a clause. If we accept this position, then the specifications of path and manner information are achieved by equivalent grammatical forms in Chinese, and Chinese might be neither a V-language nor an S-language. Instead, it could belong to the class of what Slobin (2004:226) calls an "equipollently-framed" language, where "both manner and path are expressed by 'equipollent' elements—that is, elements that are equal in formal linguistic terms, and appear to be equal in force or significance".

Although the recognition of this third language type is seemingly a logical solution to the controversy, few studies have been undertaken with the goal of providing evidence to show that Chinese does behave differently from V-languages and S-languages. Since grammatical analysis has proven to be unhelpful for this purpose, we need to turn our attention to analysis of language as it is used in speech. Talmy's criteria of "characteristic expression" in his typology system mandate close examination of language use. But it was Slobin who put this into practice, and demonstrated the importance and unique value of the shift from the study of typology of language structures to the study of typology of language use.

3. Typology of language use in spoken and written discourse

Studies of narrative discourse have revealed that the structural differences between S-languages and V-languages have significant and predictable implications for the organization of connected discourse in the two language types. They influence speakers' rhetorical styles (Slobin, 1996a, 1997) and habitual patterns of language use (Slobin, 2004), and in fact impact the structure of an entire narrative (Hendriks, 1993; Hickman, 2003; Ibarretxe-Antuñano, 2004). Several contrasts have been observed, and Slobin (1997) formulates the following proposals regarding manner, path, ground, and the general rhetoric style.

(5) Slobin's (1997) proposals regarding motion event descriptions in S- versus V-languages
   regarding manner
   a. V-language users express manner only when it is absolutely needed, and typically, translational motion takes precedence.
   b. S-languages have a larger and more diverse lexicon of manner verbs than V-languages.
   c. Manner verbs in S-languages are more expressive than those in V-languages.
   regarding path
   d. V-language users mention fewer path segments than S-language users do when describing comparable motion events.
   regarding ground
   e. V-language users use fewer ground elements per clause than S-language users do.
   f. V-language users are more likely to use motion verbs without any ground information in the clause than S-language users.
   regarding rhetorical style
   g. V-language users devote more attention to describing aspects of the static scene which provides the physical context for a motion event, whereas S-language users devote more attention to descriptions of the process of motion.[2]

This pattern of contrasts between S- and V-languages in language use has been confirmed by independent researchers working on various languages (e.g., Slobin, 1997, and the collection of papers in Strömqvist and Verhoeven, 2004), and is "apparently independent of language family, geographical area, and culture" (Slobin, 2003:164).

These typological characteristics in discourse may serve as indices for determining the typological category of Chinese. If Chinese is an S-language, we would expect Chinese speakers to exhibit habitual patterns of motion event descriptions similar to those of English speakers. If Chinese is a V-language, we would expect Chinese speakers to exhibit habitual patterns of motion event descriptions similar to those of Spanish speakers. If Chinese speakers exhibit a mixed pattern that does not completely resemble any of the two language types, then we have to conclude that Chinese indeed belongs to another language type.

In our previous studies (Chen, 2005, 2007; Guo and Chen, in press), we have tested Slobin's (1997) proposals with elicited spoken narratives. When asked to tell a "frog story" from the wordless picture book *Frog, where are you?* (Mayer, 1969), Chinese speakers' descriptions of motion events differ from the descriptions of both Spanish and English speakers. On the one hand, Chinese speakers pattern with English speakers in their tendency to (i) use a great variety of manner verbs, and (ii) break a scene into several segments and use separate action clauses to mention, segment-by-segment, what takes place in the scene. On the other hand, Chinese speakers pattern with Spanish speakers in their tendency to (iii) provide limited description of ground elements, and (iv) provide rich descriptions of the physical settings in which movement takes place. Thus, the elicited spoken narrative data lead to the contention that Chinese belongs to a third language type (i.e., equipollently-framed).

4. Examining motion event descriptions in written narratives

Although the elicited spoken narratives provide us with very informative data, this type of data may have its limitations. Speakers in the context of spontaneous oral narration may be constrained by the online time pressure

---

[2] Slobin (1997) illustrated the contrast between dynamic and static descriptions in the two types of languages with the following translation of a motion event description from English to Spanish.
  English original:
  Then I, too, went down the steep twisting path through the dark woods to the beach below.
  Spanish translation:
  También yo toméen tonces el pendiente y tortuoso sendero que, atravesando la arboleda oscura, bajaba a la playa . . .
  "Then I, too, took the steep and twisting path that, traversing the dark woods, descended to the beach . . ."
The English original allows the protagonist to *go down the path – through the woods – to the beach*, whereas the Spanish translation uses a relative clause to present a static description of the path that *traverses the woods* and *descends to the beach*.

of speaking as well as by 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 an *artificial* task. Because 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 wanted to be, might relate the same event or sequence of events with the same degree of elaboration, regardless of the language type.

For this reason, Slobin (1996a) compared references to ground objects in the motion event descriptions in five Spanish and five English novels. He found that English novelists make more frequent reference to ground objects in association with verbs of motion than Spanish novelists. Specifically, the percentage of the motion event descriptions that included some phrases referring to ground objects was higher in the English novels (96%) than in the Spanish novels (81%). In addition, English novelists tended to mention a larger number of elements referring to ground objects per motion event description than Spanish novelists. Slobin (2000) also reported a study comparing the use of manner of motion verbs in seven novels from each of two S-languages, English and Russian, and two V-languages, Spanish and Turkish. In comparison to the two V-languages, the two S-languages made more frequent use of manner verbs, which were also more diverse and expressive. Specifically, about half of the motion verbs that were used in English and Russian novels encoded some information about manner of movement, but less than one quarter of the verbs used in Spanish and Turkish novels were manner verbs. While English novels contained 51 types of intransitive verbs of self-motion, Spanish and Turkish novels had only 23 and 15 respectively. Slobin concluded that while manner verbs are a salient aspect of novels in S-languages, they are not in V-languages. Other studies showed similar patterns. Özçalışkan and Slobin (2003) examined novels in Turkish (a V-language) and English (an S-language), and observed the same typological contrast in motion verb use. They also examined alternative means of conveying information about manner of movement, and found that Turkish and English novels both make use of alternative means of conveying manner at comparable rate. Interestingly, however, Özçalışkan and Slobin (2003:268) noted important differences in the functions of alternative manner expressions in English and Turkish: ''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''. Oh (2003) found that manner verbs were more heavily used in novels written in English (an S-language) than those written in Korean (a V-language). The contrast found in novels between S-languages and V-languages, then, has mirrored that found in oral narration.

5. The present study of motion expressions in Chinese novels

Previous studies provide clear evidence to suggest that the language use patterns in discourse are sensitive to the structural typological differences in the encoding of motion events. These findings suggest that a study of Chinese written discourse could make significant contributions to the typological categorization of Chinese, by providing additional information to studies based on elicited spoken discourse data. This study therefore sets out to examine how Chinese writers express motion events in creative fictions. The goal is to see whether the discourse characteristics of motion event descriptions observed in the previously studied oral narratives will also show up in written narratives in Chinese.

This study will compare Mandarin Chinese data with comparable data from English (an S-language) and Spanish and Turkish (two V-languages). Specifically, the present study addresses the following four research questions:

(i)   Is the use of motion verbs and motion constructions in Chinese similar to that in S-languages or in V-languages or neither?

(ii)   Do Chinese motion expressions frequently contain dynamic path expressions, as in S-languages; or contain only limited path details, as in V-languages?

(iii)   Are the references to ground elements in Chinese similar to those in S-languages or in V-languages or neither?

(iv)   Is the use of alternative expressions of manner in Chinese novels similar to that in S-languages or in V-languages or neither?

5.1. Samples and selection procedures

The samples consist of descriptions of motion events in nine novels written in Chinese by twentieth- and twenty-first-century professional writers from mainland China and the Hong Kong Special Administrative Region. The nine novels are listed in Appendix B. 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. They were chosen from a larger pool, as there were not enough episodes of motion events in some other Chinese novels sampled.[3] 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'' (Özçalışkan and Slobin, 2003:260). The episode can be about a simple trajectory as in (6) or an extended journey as in (7) with six motion event clauses. What matters is that the protagonist ended in a different place within an uninterrupted stretch of a narrative (cf. Slobin, 1996a:207).

(6) 他拉开门<u>出去</u>了。(Novel 4: My University Life)
Tā lā kāi   mén <u>chū qù</u> le.
he pull open door <u>exit go</u> PFV
"He pulled the door open and went out."

(7) 他爬上墙头，连跌带滚，跳进院墙外面水壕里，又忙爬起来，穿过榆树丛子，钻进一家菜园子里，踏着瓜蔓和豆苗，从柳树障子的空隙里，跑往韩长脖家里去了。(Novel 9: Thunderstorm)
Tā pá shàng   qiángtóu,
he climb ascend fence
liándiēdàigǔn,   tiào jìn yuàn   qiáng wàimiàn shuǐháo   lǐ,
tumbling-and-stumbling jump enter courtyard fence outside   water-ditch in
yòu máng pá qǐ lái, chuān   guò yúshù cóngzi,
again hasten crawl rise come, penetrate pass elm   thicket
zuān   jìn   yī jiā càiyuánzi   lǐ,
squeeze enter one CL vegetable-garden in,
tà   zhe guāmàn   hé dòumiáo,
tread DUR melon-vine and bean-sprout
cóng liǔshù zhàngzi de   kòngxì lǐ, pǎo dào Hán Chángbó jiā   lǐ qù le.
from willow hedge   ASSOC gap   in run arrive Han long-neck home in go PFV
"He climbed up the fence, and tumbling and stumbling, he jumped into a water ditch outside the courtyard, and then he hastened to crawl up, dashed through a dense growth of elm trees, and squeezed into a vegetable garden; treading on the melon vine and bean sprouts, through the gaps in the willow hedges, he ran toward Long-neck Han's house."

To make the results maximally comparable with previous studies on motion event descriptions in novels, we follow the practice of focusing on descriptions of self-initiated motion. As a result, caused motion as shown in (8) is not included for analysis. Caused motion is defined as a motion event where the movement of figure (e.g., the guard) is caused by the action of another agent (e.g., the man named 'Miao Renfeng').

---

[3] These other Chinese novels seem to have the flavor of Spanish novels. Slobin (1996a) notes that it is often difficult to find any explicit 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:207). Of course, writers of different languages might not differ with respect to their cognitive ability to recognize the movement of the protagonist. But rather, as Oh (2003) suggests, crosslinguistic differences might exist in whether motion events are expressed explicitly or implicitly. These other Chinese novels might also be the product of individual variations, as one reviewer suggests that some novels may focus more on characters' movements, and others more on character portrayal and dialogue.

(8)　　苗人凤一脚将那名侍卫踢得飞向屋顶. (Novel 3: A Flying Fox on the Snowy Mountain)
　　　Miáo Rénfèng yī　jiǎo jiāng　nà　míng shìwèi tī　　de　　fēi xiàng　wūdǐng.
　　　Miao Renfeng one leg ACC　that CL　guard　kick CSC fly toward roof
　　　"Miao Renfeng kicked the guard such that the guard flew toward the roof."

5.2. Coding

Each of the 180 episodes (20 episodes × 9 novels = 180) was further divided into clauses and coded for motion event descriptions, following Berman and Slobin (1994:657) for the definition of 'clause' as a linguistic unit that contains a unified predicate, i.e., "a predicate that expresses a single situation". Thus, for our purpose, a predicate may be any motion verb or motion verb construction similar to the ones discussed below.

The number of motion event descriptions varied from episode to episode, and there were a total of 520 motion event descriptions in the 180 episodes. The first author and a graduate research assistant who is a native speaker of Chinese and who was not aware of the purpose of the study coded the motion event descriptions independently using the coding scheme described and illustrated below (see also Guo and Chen, in press). They then compared each other's coding to check inter-coder reliability. All discrepancies were then discussed with the third person, the second author of the paper, until consensus was reached. Four relevant aspects were coded: motion verbs, motion verb constructions, expressions of ground information, and alternative expressions of manner. Some discrepancies were found in the coding of motion verbs, with an initial inter-coder agreement being 95.4%.

5.2.1. Motion verbs

In order to examine the frequencies and diversity of different types of motion verbs, all motion verbs used in the motion event descriptions were identified and coded. Four categories were identified according to their meaning of motion: manner verbs, path verbs (non-deictic), deictic verbs (indicating path), and neutral verbs. *Manner verbs* refer to the way in which a figure carries out a motion. Slobin (2004:255) refers to them as "an ill-defined set of dimensions that modulate motion, including motor pattern, rate, rhythm, posture, affect, and evaluative factors". *Path verbs* refer to the trajectory over which a figure moves, typically with respect to another reference object (i.e., the ground). *Deictic verbs* indicate path relative to the speaker. Mandarin has two deictic verbs, 来 *lái* "come" for motion approaching the speaker, and 去 *qù* "go" for motion away from the speaker. *Neutral verbs* are those verbs that do not express any notion of translational motion in the normal context, but when used in the V1 slot in the V1 + V2 serial verb construction acquire the function and meaning of manner verbs. An example of neutral verb is the word 摸 *mō* "feel, touch" in 摸到 *mō dào* (feel/touch arrive) "feel one's way to".

Some fixed phrasal verbs that express motion were excluded from analysis in this study. Previous studies (Chen, 2005, 2007; Guo and Chen, in press) have observed the use of such phrasal motion expressions as 到达 *dàodá* "arrive", 前进 *qiánjìn* "move forward", 路过 *lùguò* "pass by", 来到 *láidào* "arrive", and 经过 *jīngguò* "pass by". They seem to belong to none of the four categories because of their distinct structural properties. First, normal manner verbs or path verbs can be followed by a deictic verb (e.g., 走来 *zǒu lái* (walk come) "walk over here", or 过来 *guò lái* (cross come) "cross over here", or 走过来 *zǒu guò lái* (walk cross come) "walk across over here"). But none of these phrasal verbs can precede the deictic verbs. Second, the manner verb and the path verb in a serial verb construction can be separated by the potential marker 得 *de*, the negation marker 不 *bù*, and the perfective aspectual marker 了 *le* (e.g., 走得/不/了过来 *zǒu de/bù/le guò lái* (walk can/cannot/PFV cross come) "(One) can walk over here"; "(One) cannot walk over here"; "(One) has walked over here"). But none of these phrasal verbs has this grammatical property, because the two characters in the phrasal verbs are not separable morphological units. Third, these phrasal verbs express a combined meaning of manner + path or path + path that cannot be categorized as either manner or path of motion. The use of these expressions is very rare, and in fact only one example of each was found in the data sampled in the study.

5.2.2. Motion verb constructions

In Mandarin, the serial verb construction normally allows a maximum of three verbal components side by side in the order of Manner + Path + Deictic. Any of these three verb types can also form two-component constructions, or occur alone, resulting in the following eight verb construction types: M + P + D, M + P, M + D, P + D, P + P, M, P, and D. Examples are given below:

(9)   The eight motion verb constructions
a.   M+P+D
他以极其迅速敏捷的步伐，霹雳闪电般的<u>走了过来</u>。(Novel 7: The Long March: 1934-
1935)
Tā yǐ jíqí xùnsù mǐnjié de   bùfá, pīlì   shǎndiàn bān de   <u>zǒu</u> le <u>guòlái</u>.
he use very rapid swift NOM step firebolt lightning like AdvM <u>walk</u> PFV <u>crosscome</u>
"He walked over with very rapid and swift steps, like thunderbolts and lightning."
b.   M+P
有许多人咚咚地从四楼<u>跑下</u>三楼. (Novel 4: My University Life)
Yǒu xǔduō rén   dōngdōng   de cóng sì lóu <u>pǎo xià</u>   sān lóu.
exist many people onomatopoeia AdvM from four storey <u>run descend</u> three storey
 "Many people ran down from the fourth floor to the third."
c.   M+D
赵玉林慌忙爬起来，往北门<u>跑去</u>. (Novel 9: Thunderstorm)
Zhàoyùlín huāngmáng pá   qǐ lái,   wǎng běi   mén <u>pǎo qù</u>.
Zhaoyulin hastily   crawl rise come toward north gate <u>run go</u>
"Zhaoyulin scrambled up hastily, and ran toward the north gate."
d.   P+D
他拉开门<u>出去</u>了。(Novel 4: My University Life)
Tā lā   kāi   mén <u>chū qù</u> le.
he pull open door <u>exit go</u> PFV
"He pulled the door open and went out."
e.   P+P
他们<u>回到</u>家里。(Novel 1: Cold Nights)
Tāmēn <u>huí   dào</u>   jiā   lǐ.
they   <u>return arrive</u> home in
"They returned back home."
f.   M
他转身向楼下<u>走</u> (Novel 6: Love to Play)
Tā zhuǎn shēn xiàng   lóuxià   <u>zǒu</u>.
he turn   body toward downstairs <u>walk</u>
"He turned away and started to walk downstairs."
g.   P
不久他<u>到</u>了家. (Novel 1: Cold Nights)
Bùjiǔ tā <u>dào</u>   le   jiā.
soon he <u>arrive</u> PFV home
"Soon he arrived at home."
h.   D
李江云<u>来</u>了(Novel 6: Love to Play)
Lǐ Jiāngyún lái   le.
Li Jiangyun come PFV
"Li Jiangyun arrived."

    In the M + P + D or M + P constructions, neutral verbs that do not indicate any notion of motion on their own are also used in the M position. These verbs, as listed in Table 1, acquire the motion meaning once they are combined with the path verb. In these situations, the neutral verbs become temporary manner verbs. Therefore, these neutral verbs are treated as M in these constructions. An example is given in (10).

(10)   Neutral verbs as M in M+P
他<u>摸到</u>障子外头的水塘边. (Novel 9: Thunderstorm)
Tā <u>mō dào</u> zhàngzi wàitóu de   shuǐtáng biān.
he <u>feel arrive</u> fence   outside NOM pond   side
"He felt his way to the pond outside the fence."

Table 1
Verb types with frequency counts in the sample from the nine Chinese novels.

Order	Character	Pinyin	Meaning	Frequency	Order	Character	Pinyin	Meaning	Frequency
Manner verbs (41 types)									
1	走	*zǒu*	"walk"	176	22	滑	*huá*	"slide"	2
2	跑	*pǎo*	"run"	37	23	退	*tuì*	"move backward"	2
3	跳	*tiào*	"jump"	28	24	乘	*chéng*	"drive"	1
4	奔	*bēn*	"ran quickly/gallop"	16	25	抢	*qiǎng*	"rush"	1
5	转	*zhuǎn*	"turn"	11	26	登	*dēng*	"climb"	1
6	爬	*pá*	"crawl/climb"	11	27	掉	*diào*	"fall"	1
7	跨	*kuà*	"stride"	10	28	驶	*shǐ*	"drive"	1
8	冲	*chōng*	"dash"	10	29	摔	*shuāi*	"fall"	1
9	钻	*zuān*	"squeeze"	9	30	翻	*fān*	"turn/tip over"	1
10	穿	*chuān*	"cross"	7	31	跟	*gēn*	"follow"	1
11	逃	*táo*	"escape"	6	32	滚	*gǔn*	"roll"	1
12	溜	*liū*	"slide/sneak away"	5	33	拥	*yōng*	"swarm"	1
13	飞	*fēi*	"fly"	4	34	涌	*yǒng*	"gush"	1
14	拐	*guǎi*	"turn"	4	35	落	*luò*	"fall"	1
15	追	*zhuī*	"chase"	4	36	踢	*tī*	"kick"	1
16	赶	*gǎn*	"hurry through"	3	37	拖	*tuō*	"drag"	1
17	踱	*duó*	"walk slowly"	3	38	陷	*xiàn*	"sink"	1
18	蹿	*cuàn*	"leap"	2	39	踅	*xué*	"turn back"	1
19	躲	*duǒ*	"hide"	2	40	越	*yuè*	"jump over"	1
20	迎	*yíng*	"confront"	2	41	扑	*pū*	"throw oneself on"	1
21	迈	*mài*	"stride"	2					
Neutral verbs (6 types)									
1	站	*zhàn*	"stand"	8	4	摸	*mō*	"feel"	1
2	躺	*tǎng*	"lie on a surface"	1	5	坐	*zuò*	"sit"	1
3	挤	*jǐ*	"push"	1	6	带	*dài*	"take/bring"	1
Path verbs (13 types)									
1	到	*dào*	"arrive/reach"	122	7	回	*huí*	"return"	22
2	出	*chū*	"exit"	71	8	起	*qǐ*	"rise"	16
3	进	*jìn*	"enter"	62	9	开	*kāi*	"part/open"	7
4	过	*guò*	"cross"	52	10	离	*lí*	"leave/part"	5
5	下	*xià*	"descend"	44	11	入	*rù*	"enter"	2
6	上	*shàng*	"ascend"	34	12	倒[a]	*dǎo*	"fall down"	1

[a] The verb 倒 dǎo found in the data does not seem to encode any information about manner of movement, as it follows the manner verb 摔 shuāi "fall". It is translated it into English as "fall down" for lack of a equivalent path verb in English. It should also be pointed out that the verb 倒 dǎo can be used as a manner verb, as in 倒下来 dǎo xià lái "topple/fall down".

The other construction type that is coded in the MP category includes cases where a manner verb is followed by the locative co-verb 在 *zài* "at", as in (11). In this context, the co-verb *zài*, which normally indicates location else where, acquires a sense of path by way of collocation with the manner verb that precedes it.

(11)   Locative co-verb 在 *zài* "at" as P in M+P
恰好落在林则徐的轿前. (Novel 5: Stories of Late Qing Dynasty)
Qiàhǎo luò zài Lín Zéxú de   jiào   qián.
exactly fall at   Lin Zexu GEN sedan-chair front
"(The assassin) landed right in front of the sedan-chair for Mr. Lin Zexu."

5.2.3. Ground phrases
To address research question 3, the expressions providing ground information in the same clause with the motion verbs were identified and coded. Ground includes source (e.g., 从洞里 *cóng dòng lǐ* "from the hole"), medium (e.g., 跑过树林 *pǎo guò shùlín* "run through the forest"), and goal (e.g., 钻进洞里 *zuān jìn dòng lǐ* "squeeze into the hole") against which the figure moves. Following Slobin (1996b), a distinction was made between plus-ground and minus-ground clauses. Plus-ground clauses contain one or more pieces of ground information. In (12a), for example, the two

motion event descriptions each contain a piece of ground information, and therefore there are two plus-ground clauses. Minus-ground clauses do not have any ground information, as in (12b).

(12)　　a. Plus-ground clauses
他们俩到了<u>街上</u>, 街上已经全黑了, 他们就大步的朝<u>韩家</u>走去. (Novel 2: The Sun Shines over the Sanggan River)
Tāmēn liǎ dào le　<u>jiēshàng</u>, jiēshàng yǐjīng quán　　hēi le,
they　two reach PFV <u>street</u>　　street　　already completely dark PFV
tāmēn jiù dà bù de　　cháo　<u>Hán jiā</u>　zǒu qù.
they　then big step AdvM toward <u>Han house</u> walk go
"They arrived at the street, which was in complete darkness. Then they walked in big strides toward the house of the Han family."
b. Minus-ground clauses
李江云来了 (Novel 6: Love to Play)
Lǐ Jiāngyún lái　　le.
Li Jiangyun come PFV
"Li Jiangyun arrived."

5.2.4. *Alternative expressions of manner*

To address research question 4, all expressions that depicted manner of movement without the use of a manner verb were examined. Following Özçalışkan and Slobin (2003:265), two major types of alternative descriptions of manner were coded: *adverbials* [adverbs, as in (13a), adverbial phrases, as in (13b), or adverbial clauses, as in (13c)], and as in (14) *descriptions* of "internal state or physical condition of a moving entity" or "features of the physical setting that could influence manner of motion".

(13)　　Adverbials
　　　　a. Adverbs[4]
　　　　匆匆地走 *cōngcōng de zǒu* "walk <u>hastily</u>"
　　　　b. Adverbial phrases
<u>他以极其迅速敏捷的步伐</u>，<u>霹雳闪电般的</u>走了过来。(Novel 7: The Long March: 1934-1935)
Tā yǐ　jíqí xùnsù mǐnjié de　　bùfá, pīlì　　shǎndiàn bān de　　zǒu le　guò lái.
he <u>use very rapid swift　NOM step</u> <u>firebolt lightning like AdvM</u> walk PFV cross come
"He walked over <u>with very rapid and swift steps, like thunderbolts and lightning</u>."
c. Adverbial clauses
<u>我没跑步，但走得很快</u>，走进办公室. (Novel 4: My University Life)
<u>Wǒ méi pǎobù, dàn zǒu de　hěn kuài</u>, zǒu jìn　bàngōngshì.
<u>I　not run　　but walk CSC very fast</u>　walk enter office
"<u>I didn't run</u>, but <u>walked very fast</u>. (I) walked into the office."

(14)　　Descriptions
伤员们也挣扎着站起来，互相搀扶着，一拐一拐地走着，<u>在他们走过的地方，洒着斑斑血迹</u>。(Novel 7: The Long March: 1934-1935)
<u>Shāngyuánmēn</u> yě　zhēngzhá zhe　zhàn qǐ lái,
<u>the-wounded</u>　also struggle　DUR stand rise come
hùxiāng　chānfú zhe,　yīguǎiyīguǎi de　　zǒu zhe.
each-other hold　DUR　limp　　　　AdvM　walk DUR
<u>Zài tāmēn zǒu guò de　dìfāng, sǎ　zhe　bānbān　　xuèjī.</u>
<u>at　they　　walk pass NOM place　drop DUR full-of-dots-of bloodstain</u>
"<u>The wounded</u> also struggled to stand up, holding each other and walking with a limp. <u>The places they walked by were filled with bloodstains</u>."

---

[4] Manner adverbs in Chinese are typically derived from adjectives with the addition of the suffix *–de* (Li and Thompson, 1981).

Example (14) provides a description of the physical condition of the moving entities, *the wounded*, and a description of the physical setting, *the places they walked by were filled with bloodstains*, allowing one to infer the manner of movement. These alternative manner expressions provide information about manner either explicitly or implicitly beyond the use of the manner verbs.

5.3. Results

5.3.1. Motion verb use: Types

Table 1 on p. 9 presents the list of the manner verbs, neutral verbs, and path verbs, and their frequencies of use in the motion event descriptions sampled from the nine Chinese novels. There were 41 manner verb types, 6 neutral verb types, and 12 path verb types with varying frequencies of occurrence.

A major difference between S-languages and V-languages lies in the numbers of manner and path verbs in terms of both type and token. The number of types indicates the richness of the lexicon, and the number of tokens indicates the frequencies of occurrence. Özçalışkan and Slobin (2003) claimed that S-languages tend to have significantly richer manner verb lexicons than V-languages. Using the same sampling procedure as did this study, they found that novels in English (an S-language) contained more than twice as many manner verb types (64 types) than novels in Turkish (a V-language) novels (26 types). Our results suggest that Chinese falls between these two language types, as shown in Table 2.

Even if we include the six neutral verbs to the manner verb category (i.e., 坐 *zuò* ''sit'', 挤 *jǐ* ''push'', 摸 *mō* ''feel one's way'', 站 *zhàn* ''stand'', 躺 *tǎng* ''lie horizontally'', and 带 *dài* ''carry''), the pattern still holds. It is evident that Chinese differs from both S- and V-languages in terms of the lexical richness of manner verbs.

Table 2
Manner verb types in nine novels in English, Chinese, and Turkish.

	English	Chinese	Turkish
	S-language	?-language	V-language
Manner verb types	64	41	26

5.3.2. Motion verb use: Tokens

The frequency and percentage of different types of motion verb used in the nine Chinese novels are presented in Table 3, along with a comparison with those used in nine English and nine Turkish novels reported in Özçalışkan and Slobin (2003).

Table 3 shows two important findings. First, novels written in Chinese included more tokens of manner verbs (45.3%) than novels written in Turkish (34%), but less than novels written in English (53%). Second, while English novels heavily relied on manner verbs (53% manner verbs as compared to 27% of path verbs) in describing motion events and Turkish novels heavily relied on path verbs (59% path verbs as compared to 34% of manner verbs), the contrast between the percentages of these two types of motion verbs in Chinese novels is much less drastic (45.3% manner verbs as compared to 53.1% path verbs). The pattern of motion verb use in Chinese is thus different from that found in both an S-language like English and a V-language like Turkish.

Table 3
Percentages of different motion verbs used in the nine novels in Chinese, English and Turkish.[a]

	Manner	Path	Neutral	Total
Chinese	45.3% (374)	53.1% (438)	1.6% (13)	825
English	53%	27%	20%	N/A
Turkish	34%	59%	7%	N/A

Note: The numbers in parentheses indicate frequencies. This information is not available for English and Turkish in Özçalışkan and Slobin (2003).

[a] 2% of manner verbs in English were used in subordinate constructions (e.g., go running), and 4% of manner verbs in Turkish were used in subordinate constructions (e.g., yuvarlanarak düş ''fall rolling''). The percentages are collapsed here for ease of comparison. In addition, the neutral verbs in English and Turkish are verbs with no manner or path such as *go* or *move*, and therefore are not the same as those in Chinese. Readers are referred to Özçalışkan and Slobin (2003) for details.

Table 4
The distribution of motion verb constructions in the nine Chinese novels.

Motion verb construction		Token	Percentage	Subtotal
Manner + path	MPD	103	19.81%	62.31%
	MP	221	42.50%	
Manner only[a]	MD	42	8.08%	14.81%
	M	35	6.73%	
Path only	PD	27	5.19%	22.12%
	PP	20	3.85%	
	P	68	13.08%	
Deictic only	D	4	0.77%	0.77%
Total		520	100%	

[a] Although the two deictic verbs express a very general sense of path of motion, the meaning is primarily focused on the directional relationship with the speaker. In addition, other researchers (e.g., Özçalışkan and Slobin, 2003) categorize motion verbs such as *come* and *go* as "neutral verbs", expressing neither manner nor path. For this reason, MD constructions are considered as "manner only" constructions.

5.3.3. Motion verb constructions

Since a Chinese clause allows a verb phrase that contains either a single verb (either a manner verb or a path verb), or a serial verb construction (including both a manner verb and a path verb), it is important to examine the distribution of the different verb constructions. The distribution of the eight types of motion verb constructions used by the Chinese novelists is presented in Table 4.

Table 4 shows that Chinese writers use a significant number of manner only (14.81%) or path only (22.12%) verb constructions, with path only constructions taking a slight lead over manner only constructions. This indicates that both manner verbs and path verbs are considered independent main verbs in Chinese discourse. However, even though manner and path are frequently expressed separately, the majority of motion verb constructions contain both manner and path verbs. The MPD and MP constructions constitute 62.31% of all motion verb constructions. Clearly, Chinese writers characteristically prefer to include both manner and path components when referring to a motion event. These data suggest that Chinese may indeed be an equipollently-framed language in describing motion events.

5.3.4. Description of ground elements

Table 5 shows the distribution of plus-ground clauses in Chinese novels, as compared to those for English (an S-language) and Spanish (a V-language). In the Chinese novels, 83% of motion events contain a ground element. A previous study by Slobin (1996a) shows that 96% of such descriptions are plus-ground clauses in five English novels, and 81% in five Spanish novels. This seems to indicate that Chinese behaves more similarly to V-languages than S-languages.

Table 6 presents the percentages of motion event clauses that contained different numbers of ground elements in Chinese (present study) and English and Spanish novels (Slobin, 1996a).

Table 5
Percentage of plus-ground clauses in novels.

	English	Chinese	Spanish
Plus-ground clauses	96%	83%	81%

Table 6
Percentages of clauses containing different amount of ground information.

	Number of ground elements per motion event clause			
	0	1	2	3+
English	4%	61%	26%	9%
Chinese	17%	81%	2%	0%
Spanish	19%	73%	8%	0%

Table 7
Frequency of motion descriptions containing alternative manner expressions in novels.[a]

	Adverbials	Descriptions	Total
Chinese	98	4	102
English	73	34	107
Turkish	93	20	113

[a] Results for English and Turkish were drawn from Özçalışkan and Slobin (2003:266).

Table 8
The percentage of alternative manner expressions to accompany a manner verb in novels.[a]

Chinese	English	Turkish
100%	73%	39%

[a] Results for English and Turkish were drawn from Slobin (2004:232).

Table 6 shows that when Chinese novelists do provide ground information about the source, goal or medium of movement, they tend to limit themselves to just one piece of information, and never refer to more than two. In this respect, Chinese uses more one-ground-element clauses and fewer two-ground-element clauses even than a V-language like Spanish. This suggests that Chinese narrations, when they treat ground of movement, behave more like a V-language, such as Spanish, than like an S-language, such as English.

5.3.5. Alternative expressions of manner

Table 7 provides a comparison between the novels in Chinese, English (an S-language), and Turkish (a V-language) with regard to the use of alternative means for expressing manner of movement.

The results in Table 7 seem to suggest that professional writers, regardless of their native language type, make frequent use of alternative manner expressions in their descriptions of motion events. However, Özçalışkan and Slobin (2003) discovered different functions that these alternative expressions served in English and Turkish novels. As shown in Table 8, in English, the majority of alternative manner expressions (73%) were used to accompany and qualify manner verbs (e.g., *Fido **very very quietly** <u>slunk</u> out of the water.*), thereby augmenting additional attention to manner, whereas in Turkish only 39% of alternative manner expressions qualified a manner verb. The majority (61%) occurred with non-manner verbs (e.g., *evden <u>yel gibi</u> çıktı* 'he exited from the house <u>like the wind</u>'). In comparison, Chinese writers used these alternative manner expressions exclusively (100%) to accompany manner verbs.

It can thus be concluded that the habitual use of alternative expressions of manner in Chinese is different from those found both in V-languages and S-languages, as far as the functions of such expressions are concerned.

6. Discussion

6.1. The use of motion verbs and motion verb constructions in Chinese novels

The results above provide some evidence that Chinese is similar to neither S-languages nor V-languages, but rather stands out as belonging to a distinct third type. In terms of the diversity of the lexicon of manner verbs, Chinese is richer than a V-language such as Turkish, but not as rich as an S-language such as English. In addition, English shows a predominant use of manner verbs, while Turkish shows a predominant use of path verbs. In Chinese, by contrast, manner and path verbs are both very frequent, though path verbs are slightly more frequent. In addition, the majority of Chinese motion verb constructions are M + P constructions, while the M constructions and P constructions are relatively comparable in frequency to one another.

As Slobin (2000) points out, descriptions of manner are largely determined by the language specific lexicalization patterns, which in turn determine the types of grammatical construction for motion events of different languages.

According to Slobin, the construction in (15a) is typically associated with motion events in an S-language such as English and (15b) with a V-language such as Spanish. Since manner of motion is routinely expressed in a syntactically obligatory component, i.e., the main verb, in S-languages, there is no additional "cost" to adding richer manner expressions. By contrast, since the verb slot is typically occupied by a path verb in a V-language, the addition of a manner expression imposes some additional "cost", in that it has to add an element or phrase to the sentence. As a result, speakers of S-languages consistently show both higher frequency of use and greater lexical diversity of manner verbs than speakers of V-languages (Slobin, 2000:110).

(15)　　a.　　*S-language construction type*
　　　　　　　[motion + manner]　　path　　　　ground
　　　　　　　　　　│　　　　　　　│　　　　　　　│
　　　　　　　　verb^{finite}　　　satellite　　noun
　　　　b.　　*V-language construction type*
　　　　　　　[motion + path]　　ground　　　manner
　　　　　　　　　　│　　　　　　│　　　　　　　│
　　　　　　　　verb^{finite}　　noun　　　　verb^{nonfinite}
　　　　c.　　*Chinese construction type*[5]
　　　　　　　[motion + manner]　[motion + path]　ground
　　　　　　　　　│　　　　　　　　　│　　　　　　　│
　　　　　　　verb　　　　　　　　verb　　　　　　noun

We suggest that the lexicalization pattern of Chinese entails the construction type in (15c) as the characteristic expression for motion events, and the characteristic construction type predisposes our Chinese writers to deal with motion events in a distinct way. Specifically, there is one slot combining motion and manner and another one combining motion and path in Chinese, but at the same time neither manner nor path verbs are a syntactically obligatory component in a sentence. The availability of the combined slot for motion and manner may have encouraged Chinese speakers to elaborate the domain of manner of movement, resulting in a richer manner verb lexicon than that of V-languages. But since this slot is grammatically optional, rather than obligatory, the manner verb lexicon is not as rich as that of S-languages. For the same reasons, the Chinese manner verb token frequency is not as high as that of S-languages, but higher than that of V-languages. The lexicalization pattern in Chinese seems to exert two conflicting forces to produce a unique manner verb lexicon as well as usage patterns of motion event descriptions.

6.2. Making reference to grounds of movement in Chinese novels

In terms of making reference to ground elements in novels, our results suggest that Chinese tends to pattern with Spanish (a V-language) but not English (an S-language). Chinese and Spanish novelists mention fewer ground objects than English novelists who "rarely move their protagonists without mentioning some ground object relative to the path" (Slobin, 1996a:207). We observe that Chinese novelists use path verbs almost as frequently as Turkish (a V-language) novelists, and significantly more frequently than English (an S-language) novelists. The high frequency of path verb usage is particularly significant given that the path verb types are limited in Chinese, as compared to V-languages such as Turkish. The frequent use of path verbs may have led Chinese writers to provide less rich ground information in individual motion clauses like V-language writers do. The ground information is left to inference from the context. Our Chinese writers seem to prefer to use a descriptive setting to trace out different ground elements or simply to imply a transitional motion into a new ground. In (16), for example, the person came out of the yard into a back lane. The entry into the back lane was not introduced by a motion expression containing a path verb, but rather by a description of the setting, with the goal of motion implied.

---

[5] We set aside the issue of finiteness of the verbs involved.

(16)   从药店后门出来, <u>一条条整洁的小胡同里行人稀少,</u> 阳光洒在一座座四合院的房脊上, 空气干
冷清冽. 我缩脖袖手地慢慢走着, 很满意自己知道了这个女人的姓. (Novel 6: Love to
Play)

Cóng yàodiàn hòumén   chū lái,
from drugstore backdoor exit come
<u>*Yī   tiáotiáo zhěngjié de   xiǎo hútòng lǐ xíngrén   xīshǎo,*</u>
<u>One CL   tidy   NOM small bystreet in pedestrian sparse</u>
Yángguāng sǎ   zài yī zuòzuò sìhéyuàn[6] de   fángjǐ   shàng,
sunshine   sprinkle at one CL   compound GEN house-roof-ridge above
Kōngqì gān lěng qīng liè.
air   dry cold clear cold
Wǒ suōbóxiùshǒu   de   mànmàn zǒu zhe,
I   retract-neck-sleeve-hand AdvM slowly   walk DUR
Hěn mǎnyì zìjǐ zhīdào le   zhè gè nǚrén de   xìng.
very satisfied self know PFV this CL woman GEN surname
"(I) left the drugstore through the backdoor. <u>On the small, tidy bystreets, there
were very few people.</u> The sunshine sprinkled on the roof ridges of the houses of
the courtyards. The air was dry and cold. Retracting my neck and hands into my
clothes, I walked slowly. I was very pleased to have learned the last name of the
woman."

The underlined description in (16) provides us with the information about the goal of movement. Although the source of motion is explicitly stated, the goal of motion is implied by the underlined description.

Another interesting way to mention ground elements was frequently used by our Chinese novelists. Consider (17).

(17)   她走出房间, 我听到她打开另一间卧室的门锁, 接着一响, 四周又恢复了一片寂静. (Novel 6:
Love to Play)

Tā zǒu   chū fángjiān.
she walk exit room
Wǒ tīng dào <u>tā   dǎ   kāi lìng   yī jiān wòshì   de   mén suǒ,</u>
I   listen arrive <u>he/she beat open another one CL   bedroom GEN door lock</u>
<u>*Jiēzhe yī   xiǎng, sìzhōu yòu huīfù   le   yī   piàn jìjìng.*</u>
then   one sound around again resume PFV one piece silence
"She walked out of the room. <u>I heard her open the lock of another bedroom. I
heard one sound, and the world went back to complete silence</u>."

The underlined parts in (17) tell us that she walked out of one room, and went into another. However, the motion of entry is implied by opening the lock, by the sound, and by the following silence. In a sense, all these different ways of providing ground information come into competition with explicit ground phrases connected to motion predicates, and make reference to ground elements in individual motion event clauses less frequent.

With respect to ground information in motion expressions, studies of elicited spoken narratives have showed that Chinese uses even less ground information than in the present study. Percentages have been found to be significantly below those used in even a V-language, only 55.2% in the Frog Stories (Chen, 2005; Guo and Chen, in press), as compared to 82% for English, and 63% for Spanish (Slobin, 1996b). We consider these as significant evidence that Chinese cannot be classified as an S-language.

6.3. Alternative expressions of manner

The use of alternative manner expressions in Chinese novels seems to show that Chinese is similar to an S-language. Chinese writers used alternative expressions exclusively to accompany a manner verb. In contrast, V-languages typically use such expressions to accompany a non-manner verb. However, Chinese differs from an S-language in the percentages of alternative manner expressions that are used to accompany a manner verb. Why does Chinese have a higher percentage (100%) of alternative manner expressions to accompany a manner verb than English

---

[6] *Sìhéyuàn* is a *compound with houses forming the four sides of the courtyard.*

does (73%)? The answer seems to lie in the fact that the most frequently used manner verbs in Chinese are what Slobin (1997) calls first tier manner verbs, which express more general manner information. Slobin suggests that there are two tiers of manner verbs in language. The first tier consists of the more common everyday verbs such as *walk*, *fly*, and *climb*, which express manner in broad categories. In contrast, the second tier consists of more expressive and exceptional verbs like *dash*, *swoop*, *scramble*, and *scurry*, which express the more refined and unique manners of motion. The most frequently used Chinese manner verbs are the first tier verbs. In order to elaborate on manner, Chinese writers need to use alternative expressions of manner to provide the more refined manner meaning. For example, to describe the manner of walking, English writers use a dozen of verbs with fine distinctions to express the same motion. Özçalışkan and Slobin (2003:263) provide the following list.

(18)　　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

In contrast, Chinese writers typically use the verb *zǒu* ''walk'' which is very general in meaning and occasionally use *duó* ''walk slowly'' and *mài* ''stride''. It's worth mentioning that the verb *zǒu* ''walk'' was the most frequently used manner verb in the nine Chinese novels. It was used 176 times, which means it occurred in one third of the motion event descriptions examined in the study. To complement the information about manner of movement provided by the verb *zǒu* ''walk'', Chinese writers resorted to various types of adverbials such as those in (13), and descriptions of the internal state or physical condition of a moving entity or features of the physical setting that could influence manner of motion, as in (14). The examples in (19) further illustrate the use of adverbs in the Chinese novels to accompany the general manner verb to express different ways of walking.

(19)　　大步走 ***dàbù*** *zǒu* "walk with big stride", 大踏步走 ***dàtàbù*** *zǒu* "walk with big
　　　　stride", 胆战心惊地走 ***dǎnzhànxīnjīng de*** *zǒu* "walk, trembling from fear", 急急地
　　　　走 ***jíjí de*** *zǒu* "walk hastily", 快步走 ***kuàibù*** *zǒu* "walk with quick steps", 慢慢地走
　　　　mànmàn *zǒu* "walk slowly", 漫无目的地走 ***mànwúmòdì de*** *zǒu* "walk aimlessly",
　　　　默默地走 ***mòmò de*** *zǒu* "walk quietly", 摸索着走 ***mōsuǒ zhe*** *zǒu* "walk gropingly",
　　　　悄悄地走 ***qiāoqiāo de*** *zǒu* "walking quietly",一拐一拐地走 ***yīguǎiyīguǎi de*** *zǒu*
　　　　"walk with a limp", 信步走 ***xìngbù*** *zǒu* "walk aimlessly", 迅速地走 ***xùnsù de*** *zǒu*
　　　　"walk very fast",一溜烟似的走 ***yīliūyān shì de*** *zǒu* "walk like a smoke"，踽踽地走
　　　　jǔjǔ de *zǒu* "walk slowly", 橐橐地走 ***tuótuó de*** *zǒu* "walk with the sound of leather
　　　　shoes"，不知不觉地走 ***bùzhībùjué de*** *zǒu* "walk unconsciously"

To consider the relationships among Chinese and S- and V-languages in this regard, we suggest a continuum of incorporation of manner information in a sentence structure. On the one end, V-languages use alternative manner expressions to qualify non-manner verbs. On the other end of the continuum, S-languages use alternative manner expressions to extend the already refined manner information encoded in the expressive manner verbs. Sitting in the middle of the continuum, Chinese uses alternative manner expressions to accompany the more general first tier manner verbs. Thus, the use of alternative manner expressions presents another piece of evidence for the need to consider Chinese as neither an S-language nor a V-language, but rather as a third type of language.

7. Conclusions

Each language trains its speakers to pay attention to ''particular aspects of experience and to relate them verbally in ways that are characteristic of that language'' (Berman and Slobin, 1994:611). As a consequence, when it is difficult to determine the typology of a language by way of examining its structural features through data from speaker's subjective intuitions, we can address that issue by way of examining the patterns of language use by its speakers and writers. In this paper, we have examined the use of motion verbs, motion verb constructions, alternative manner expressions, and reference to ground elements in nine Chinese novels in order to gain insight into the characteristic expression of motion events in Chinese and its typological classification. The analysis suggests that Chinese professional writers express motion events in a way that does not clearly align with writers of either V-languages such as Spanish and Turkish or S-languages such as English. These distinct patterns of language use provide challenges to

the classification of Chinese as either an S-language or a V-language. Furthermore, Chinese professional writers and Chinese narrators of elicited spoken narratives (e.g., *frog stories*) express motion events in a similar manner, which suggests that these patterns of language use are consistent across modality (written versus spoken) and the task differences (elicited picture-based narration versus creative fiction writing).

We thus conclude that, in describing motion events, Chinese is not an S-language, nor a V-language. Rather, Chinese belongs to the third language type, the equipollently-framed languages.

Acknowledgements

Appendix A. List of abbreviations for grammatical morphemes

These abbreviations follow the convention in Li and Thompson (1981).

ACC	accusative
AdvM	adverb marker
ASSOC	associative
CL	classifier
CSC	complex stative construction
DUR	durative aspect
GEN	genetive marker
NOM	nominalizer
PFV	perfective aspect
PROG	progressive aspect

Appendix B. The nine Chinese novels

	Author		Date	Title in Chinese		Title in English
1	巴金	Bā Jīn	1948	寒夜	*Hán yè*	Cold Nights
2	丁玲	Dīng Líng	1948	太阳照在桑干河上	*Tàiyáng zhào zài sānggān hé shàng*	The Sun Shines over Sanggan River
3	金庸	Jīn Yōng	1958	雪山飞狐	*Xuě shān fēi hú*	A Flying Fox on the Snowy Mountain
4	梁晓声	Liáng Xiǎoshēng	1986	我的大学生活	*Wǒ de dàxué shēnghuó*	My University Life
5	单田芳	Shàn Tiánfāng	n.d.	百年风云	*Bǎi nián fēng yún*	Stories of the Late Qing Dynasty
6	王朔	Wáng Shuò	2002	玩的就是心跳	*Wán de jiù shì xīn tiào*	Live to Play
7	魏巍	Wèi Wēi	1987	地球的红飘带	*Dìqiú de hóng piāodài*	The Long March: 1934–1935
8	周而复	Zhōu Érfù	1980	上海的早晨	*Shànghǎi de zǎochén*	Morning in Shanghai
9	周立波	Zhōu Lìbō	1948	暴风骤雨	Bàofēng zhòuyǔ	Thunderstorm

References

Berman, Ruth, Slobin, Dan I., 1994. Relating Events in Narrative: A Crosslinguistic Developmental Study. Lawrence Erlbaum Associates, Hillsdale, NJ.

Chang, Jung-Hsing, 2001. The syntax of event structure in Chinese. Ph.D. Dissertation. University of Hawaii.

Chao, Yuanren, 1968. A Grammar of Spoken Chinese. University of California Press, Berkeley, CA.

Chen, Liang, 2007. The Acquisition and Use of Motion Event Expressions in Chinese. Lincom GmbH, München, Germany.

Chen, Liang, 2005. The acquisition and use of motion event expressions in Chinese. Ph.D. Dissertation. University of Louisiana at Lafayette.

Guo, Jiansheng, Chen, Liang. Learning to express motion in narratives by Mandarin-speaking children. In: Guo, J., Lieven, E., Budwig, N., Ervin-Tripp, S., Nakamura, K., Özçalışkan, Ş. (Eds.), Crosslinguistic approaches to the psychology of language: research in the tradition of Dan Isaac Slobin. Taylor & Francis Group, pp. 193–208, in press.

Hendriks, Henriëtte, 1993. Motion and location in children's narrative discourse: a developmental study of Chinese and Dutch. Ph.D. Dissertation. University of Leiden.

Hickman, Maya, 2003. Children's Discourse: Person, Space and Time across Languages. Cambridge University Press, Cambridge.

Hsueh, Feng-Sheng, 1989. The structure meaning of BA and BEI constructions in Mandarin Chinese. In: Tai, J., Hsueh, F.-H. (Eds.), Functionalism and Chinese Grammar. Chinese Language Teachers Association, South Orange, CA, pp. 95–125.

Ibarretxe-Antuñano, Iraide, 2004. Linguistic typologies in our language use: the case of Basque motion events in adult oral narratives. Cognitive Linguistics 15 (3), 317–349.

Johnson, Mark, 1987. The Body in the Mind: The Bodily Basis of Meaning, Imagination, and Reason. University of Chicago Press, Chicago, IL.

Li, Charles N., Thompson, Sandra A., 1981. Mandarin Chinese: A Functional Reference Grammar. University of California Press, Berkeley, CA.

Mayer, Mercer, 1969. Frog, where are you? Dial Press, New York.

Oh, Kyung-Ju, 2003. Language, cognition, and development: motion events in English and Korean. Unpublished Ph.D. Dissertation. University of California, Berkeley.

Özçalışkan, Şeyda, Slobin, Dan I., 2003. Codability effects of the expressions of manner of motion in Turkish and English. In: Özsoy, A.S., Akar, D., Nakipoğlu-Demiralp, M., Taylan, E.E., Aksu-Koç, A. (Eds.), Studies in Turkish Linguistics. Bogaziçi University Press, Istanbul, pp. 259–270.

Slobin, Dan I., 1996a. Two ways to travel: verbs of motion in English and Spanish. In: Shibatani, M., Thompson, S.A. (Eds.), Grammatical Constructions: Their Form and Meaning. Clarendon Press, Oxford, pp. 195–220.

Slobin, Dan I., 1996b. From ''thought and language'' to ''thinking for speaking''. In: Gumperz, J., Levinson, S.C. (Eds.), Rethinking Linguistic Relativity. Cambridge University Press, Cambridge, pp. 70–96.

Slobin, Dan I., 1997. Mind, code and text. In: Bybee, J., Haiman, J., Thompson, S.A. (Eds.), Essays on Language Function and Language Type: Dedicated to T. Givón. John Benjamins, Amsterdam/Philadelphia, pp. 437–467.

Slobin, Dan I., 2000. Verbalized events: a dynamic approach to linguistic relativity and determinism. In: Niemeier, S., Dirven, R. (Eds.), Evidence for Linguistic Relativity. John Benjamins, Amsterdam/Philadelphia, pp. 107–138.

Slobin, Dan I., 2003. Language and thought online: cognitive consequences of linguistic relativity. In: Gentner, D., Goldin-Meadow, S. (Eds.), Advances in the Investigation of Language and Thought. MIT Press, Cambridge, MA, pp. 157–192.

Slobin, Dan I., 2004. The many ways to search for a frog: linguistic typology and the expression of motion events. In: Strömqvist, S., Verhoeven, L. (Eds.), Relating Events in Narrative: Typological and Contextual Perspectives. Lawrence Erlbaum Associates, Mahwah, NJ, pp. 219–257.

Slobin, Dan I., Hoiting, Nini, 1994. Reference to movement in spoken and signed languages: typological considerations. In: Proceedings of the Berkeley Linguistics Society 20. pp. 487–505.

Strömqvist, Sven, Verhoeven, Ludo (Eds.), 2004. Relating events in narrative: typological and contextual perspectives. Lawrence Erlbaum Associates, Mahwah, NJ.

Tai, James, 2003. Cognitive relativism: resultative construction in Chinese. Language and Linguistics 4 (2), 301–316.

Talmy, Leonard, 1985. Lexicalization patterns: semantic structure in lexical forms. In: Shopen, T. (Ed.), Language Typology and Lexical Description: vol. 3. Grammatical Categories and the Lexicon. Cambridge University Press, Cambridge, pp. 36–149.

Talmy, Leonard, 1991. Path to realization: a typology of event conflation. In: Proceedings of the Berkeley Linguistics Society 17. pp. 480–519.

Talmy, Leonard, 2000. Toward a Cognitive Semantics: vol. II: Typology and Process in Concept Structuring. MIT Press, Cambridge, MA.

Liang Chen, PhD, is an assistant professor of communication sciences and special education at the University of Georgia.

Jiansheng Guo, PhD, is a professor of human development at California State University, East Bay.