# 空间运动事件的表达基于语言类型学和习得角度的研究

纪瑛琳 著

The Expression of Motion Events
Typological and
Developmental Perspectives

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## **Abbreviations**

AD: adults

ANOVA: analysis of variance

ASP: aspectual marker

ASSOC: associative de, genitive / adjectival /adverbial marker

AUX: auxiliary verb

BA: literally 'to manipulate, to handle'; marker of the BA construction

CH: Chinese

CHILDES: Child Language Data Exchange System

CL: classifier

CM: caused motion

DEF: definite article

DUR: durative aspectual marker zhe

EN: English

M: mean

Mdn: median

NP: noun phrase

PAST: past tense

RVC: resultative verb compound

SVC: serial verb construction

UD: utterance density

V1: the first constituent verb in an RVC; or the first verb in a serial verb construction

V2: the second constituent verb in an RVC; or the second verb in a serial verb construction V3: the optional third constituent verb in an RVC

VERB: verb root or verb compound in an utterance

VM: voluntary motion

VP: verb phrase

zhe: particle indicating a syntactically complex serial verb construction expressing the temporal simultaneity of two events

1sg: first person singular

3p: third person singular ta in Chinese

The following symbols are used in transcription:

- \* ungrammatical sentence or phrase
- ? marginally acceptable sentence

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## CHAPTER 1

## Space in language typology and language acquisition

It has long been accepted that the notion of space plays an important role in human activities and that spatial experience constitutes the earliest, most essential and most pervasive experience of human life (Johnson 1987, Landau and Zukowski 2003). The perception of where an object is with respect to our bodies or to larger surroundings and the ability to orient ourselves towards some destination by using spatial landmarks are clearly fundamental to our daily activities. Moreover, among the earliest things that young children enjoy doing is talking about objects and their motion through space (Landau and Zukowski 2003). An essential spatial understanding of the surrounding world is actually already present in babies who know for instance that a toy car set midair will certainly fall (Bowerman 1999 and Levinson 2003).

Space is universal because spatial concepts regarding entities and relations among them are constrained by our biological endowment, the visual and the haptic-kinaesthetic system in particular. Given the importance of space in human activities, the research into it can be traced back at least to Kant's philosophical notion of absolute space. In the last thirty years or so this principal cognitive domain with the above-mentioned specific properties increasingly attracts the attention of researchers in varied disciplines of language, cognition and psychology. In this context, this book aims to investigate spatial reference, particularly the expression of motion events from both typological and acquisitional points of view.

#### 1. 1 SPACE ACROSS LANGUAGES

It is important as well as interesting to study, first of all, the domain of space from a typological perspective. Given that human beings share a universal biological heritage in spatial understanding, it is reasonable to speculate that the language of space will "closely mirror the contours of nonlinguistic spatial understanding" (Bowerman 1999: 387). However, it is found that languages actually differ considerably in how they describe space. To give an example, human beings, irrespective of language and culture, equally possess the ability to spatially locate an object in relation to another, but the interpretation of these spatial relationships varies strikingly from language to language. The spatial relationship between a man and a car, for example, can be encoded as 'a man stands in front of the car', 'a man stands to the left of the car'; or 'a man stands to the west of the car', depending on which frame of reference (i. e. intrinsic, relative or absolute) a particular language adopts for locating a target. It is on such a basis that Levinson (2003) suggests that languages can be classified into five major groups according to which coordinate system, or which combination of different coordinate systems, the language systematically employs in spatial description (see Levinson 2003: 93 for details).

In the specific domain of motion, it is found that a more or less universal set of semantic information is expressed in all languages, which includes manner of motion (e.g. to skip, to climb, to crawl), directionality of motion (e.g. up, down, across, into), cause of motion (e.g. to push, to pull, to drag) and deixis (e.g. to come). At the same time, however, the degree of prominence attached to a given type of semantic information varies greatly across languages. For example, the description of a spatial event involving a change of location in English, such as A man runs across the road will be more typically represented in French as C'est un homme qui traverse la route en courant ('It's a man who crosses a road by running'). More specifically, in languages such as English, the manner of motion is foregrounded and expressed in the verb, whereas in languages such as French, the path of motion is rendered more semantically

salient in the verb, with the manner information expressed (if at all) in the periphery. Based on the different ways in which the semantic components for motion are expressed across an utterance – particularly with regard to the expression of Path – Talmy (1991, 2000) proposes a general typological framework within which languages mainly fall into two broad categories: satellite-framed and verb-framed. In the satellite-framed language, the verb typically conflates Motion and Manner of motion and/or Cause of motion, while Path is encoded outside the verb in a satellite (e.g. through the use of particles and affixes). By contrast, in the verb-framed language the verb typically conflates Motion and Path, while Manner and Cause are expressed separately in an adverbial or a gerund (when expressed at all). Examples (1) and (2), below, illustrate the difference.

- (1) Satellite-framed (e.g. English and other Germanic languages)a. The ball rolled into the hole.b. The boy pushed the ball into the hole.
- (2) Verb-framed (e.g. French and other Romance languages)

  La balle est entrée dans le trou en roulant.

  the ball has entered in the hole by rolling

  'The ball entered the hole by rolling.'

In example (1a) above, the verb roll combines the fact of the ball's movement with the way in which it moves, namely, to move forward along a surface by repeatedly turning over. In a similar vein, in (1b), the verb push denotes not only the fact that the ball moves but also the reason for this movement, namely, an outward pressure or force is being exerted against the ball for the purpose of altering its location. In contrast, in the French example (2), the verb est entrée ('entered') indicates that the motion occurs along a path and reaches an end boundary, but it does not indicate in which manner this motion takes place. The latter information is actually given separately in the gerund en roulant ('by rolling').

This typological framework as proposed by Talmy fits particularly well with

Indo-European languages (e.g. English, German, French, Spanish) where a main verb can be morphologically distinguished from its supporting elements such as particles. However, when we look at some other languages like Chinese, the shortcoming of this bipartite typology is obvious. In Chinese a motion event is typically encoded in a resultative verb compound (RVC) in which two or three constituents represent different semantic aspects of motion (e.g. manner, path, deixis) in a sequential way as demonstrated in example (3) below.

(3) Qiu2 gun3-jin4 le shan1 dong4.
ball roll-enter ASP cave

'The ball rolled into the hole.'

In the above example, the first constituent in the RVC conflates the fact of motion and the manner of motion (i. e. gun3 'roll'), and the second one denotes the path of motion (i. e. jin4 'enter'). Since grammatical elements in Chinese are not in any way morphologically marked, it is hard to determine which constituent in an RVC is a main verb and which a satellite, thereby giving rise to the debate concerning the exact status of Chinese in motion event typology. Talmy (1991, 2000) treated path constituents(s) in an RVC as a satellite and patterned Chinese with English as being satellite-framed.

However, Slobin (2004) in his data regarding the Frog story<sup>®</sup> found that it is very difficult to fit Chinese into this two-way classification system. He noticed that a particular motion scene in Chinese could be encoded by a Manner verb + Path verb combination (e.g. fei1-chu1-lai2 'fly-exit-come') or by path verbs alone (e.g. chu1-lai2 'exit-come'), with the two options occurring in a similar frequency. Notably, the latter means of expression reflects the defining property of verb-framed languages, that is, the conflation of Motion and Path in the

① Slobin in several studies uses Mayer's (1969) wordless picture book 'Frog, where are you?' to elicit oral narratives from speakers of different languages and across ages. The original picture book illustrates how a boy and his dog search for a lost pet frog in various places. The oral narratives elicited are known as Frog stories (Berman and Slobin 1994), which now form a database involving 10 languages.

verb. Slobin (2004) therefore concluded that Chinese possessed defining features of both satellite-framed and verb-framed families while not fully patterning with either. He therefore proposed a third type of languages with regard to motion events, which he termed an "equipollently-framed" language, thereby expanding Talmy's dichotomized typology into a trichotomized one. The crucial property of these equipollently-framed languages (e.g. Chinese, Thai and other serial verb languages) is that "both manner and path are expressed... by elements that are equal in formal linguistic terms, and appear to be equal in force or significance" (Slobin 2004; 228).

As illustrated above, the universality of spatial cognitive concepts and the diversity of means by which these concepts are realized in varied languages make the typological study of languages of space an important topic. Specifically, despite the shared set of semantic components for motion, how do languages systematically vary in the means by which they select and encode these components in different grammatical devices across the utterance? The present study focuses on the Chinese language and compares it to English with the aim of ascertaining the exact status of Chinese in motion event typology: is it more satellite-framed, as classified by Talmy, or more equipollently-framed as proposed by Slobin? To this end, we will investigate and compare the description of voluntary and caused motion events by adult speakers in Chinese and in English. Specifically, we will investigate what semantic components for motion they choose to report, where they tend to place them and how they organize them at the discourse level.

The typological study of motion events not only helps shed fresh light on motion event typology per se but also has important implications for related topics such as the 'rhetorical style' of a narrative discourse involving motion scenes and the online conceptualization of a motion event. As regards the former, Slobin (1996b, 2004) made a detailed exploration of literary texts in verb-framed versus satellite-framed languages. He found that speakers of a satellite-framed language tended to use a greater amount and a greater variety of manner verbs than speakers of a verb-framed language in their narrative discourse, and that the former group of speakers tended to elaborate more frequently on path

information and expressed more dynamic motion events. By contrast, discourses in a verb-framed language tended to exhibit a discursive narrative style in which speakers either implied location whilst omitting manner or represented a story via descriptions of static physical settings. These findings clearly indicate that the linguistic typology affects how speakers organize narrative discourse. Therefore, if Chinese is an equipollently-framed language, it will be interesting to explore the *rhetoric style* that the discourse of such a language like Chinese can demonstrate.

Regarding the conceptualization of a motion event for linguistic encoding, Slobin (1996a) proposes a hypothesis of "thinking for speaking" which claims that there is a kind of thinking that is intimately tied to language, namely, the thinking carried out online in the process of speaking, writing, signing or listening (and possibly also in online translation and mental imagery). "Thinking for speaking" involves identifying those characteristics of entities and events that fit some conceptualization of the event and are readily encodable in the language. In this sense, the habitual pattern of using a given language represents a particular way of thinking about the world, and a typological study of languages provides a window through which we can further examine whether motion events are mentally represented for verbal expressions in a typologically specific way.

### 1. 2 SPACE IN LANGUAGE DEVELOPMENT

The fact that speakers of different languages differ significantly in expressing motion events, despite an underlying common set of semantic components, raises a fundamental question for first language acquisition; will children follow adults in their own language and express motion events in a language-specific way from an early age on, or will their development follow universal cognitive determinants, resulting in similar expression of motion events irrespective of language? The debate regarding universal versus language-specific influences on language acquisition is not a newly arising topic. However, the discussion of this topic in the domain of space is especially meaningful. Given that space is

fundamentally a cognitive domain and that there is some clear evidence for the universality of spatial notions which have evolved independently of language, any evidence of the impact of language on development will be of particularly striking significance.

Until recently, most researchers endorsed the predominating role of cognitive determinants in children's acquisition of spatial reference (as in a review by Bowerman 1994 and Hickmann 2006). According to this view, children are guided from the outset by a uniform set of spatial concepts which has evolved during the sensorimotor period of development, and children's early grammar can be characterized as directly mapping spatial terms onto languageindependent concepts of space. In this light, space should be a domain where we are least likely to find cross-linguistic variations because our understanding of spatial relations is mainly based on a universal image schema that has a kinaesthetic basis and can be traced back to bodily experiences of the world (Johnson 1987). This 'nativism' view is deeply rooted in western philosophy and it has long been held in the psychology of language that "human spatial language is a direct reflection of our egocentric, anthropomorphic and relativistic spatial concepts" (Levinson 2003: 10). As far as language acquisition is concerned, the nativist idea is most clearly expounded by H. H. Clark (1973), as below:

The child acquires English expressions for space and time by learning how to apply these expressions to the a priori knowledge he has about space and time. This a priori knowledge is separate from language itself. . . [it] is dependent on man's biological endowment-that he has two eyes, ears, etc., that he stands upright, and so on-and in this sense it is innate (ibid.; 28).

Viewed this way, acquiring spatial language is a fairly straightforward process of "mapping local words onto antecedent concepts" (Levinson 2003: 14), and children irrespective of language and culture are thus expected to report motion events in a similar way.

However, recently more and more researchers have found that the process of mapping spatial language onto pre-linguistic cognitive concepts is not as direct as envisioned in the 'nativism' view. In fact, when a particular spatial event is linguistically represented, it seems implausible to imagine that a specific language with its own grammatical categories and semantic distinctions exerts no influence at all on the way that these spatial meanings are organized. Slobin's (1996a) proposal of learning to "think for speaking" addresses this concern. He points out that each language provides a specific set of grammatical morphemes for schematizing motion experience for the purpose of verbal expression (e.g. verb particles and prepositions in English to express Path). "It is through listening that children's attention is first drawn to the fact that certain notions are grammatically marked in the ambient language. . . and the form in which one receives information from others influences how that information is understood, stored and later accessed" (Slobin ibid.: 94). In this light, a native language we learn in childhood "is not a neutral coding system of an objective reality", but instead is a system that has trained its speakers from early on to pay attention to specific aspects of motion events and experience when talking about them (Slobin ibid.: 89). Therefore, "in acquiring a native language, the child learns particular ways of thinking for speaking" (Slobin ibid.: 76). According to this 'language-specificity' view, one can hardly expect that English and Chinese children will similarly describe their motion experiences. Instead, English children need to learn that path information is expressed through verb particles which need to be combined with verbs encoding various types of manner information in order to produce a complete representation of motion events. That is, they need to know from an early age that a motion event is characteristically packaged in their native language via the Manner verb + Path satellite combination (e.g. climb up). By contrast, Chinese young children need to learn that a motion event is typically expressed in their native language by a verb compound in which all semantic aspects regarding a motion event are encoded in sequentially ordered constituent verbs (e.g. pa2-shang4 'climbascend').

On the basis of the above discussion, it is important and meaningful to look