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The domain of motion has attracted great interest from various disciplines as language across the world exhibit significant diversities in the linguistic expressions. Whilst most cross-linguistic studies on motion event focus on the semantic distribution of path of motion (e.g., Talmy 2000; Slobin 1996), that is, whether the path information is typically encoded in the verb (verb-framed language) or satellite (satellite-framed language), little has been done to systematically investigate how the form of a motion morpheme is mapped with its related meaning. Following a cognitive functional perspective, this book explores the lexicalization of motion events in Modern Mandarin Chinese, with a particular emphasis on the type of information that a motion morpheme lexicalizes and the relation between meaning and the relative order of distribution. Based on a scalar-based analysis, results show that motion constructions in Chinese present a tendency towards manner/path complementarity, and path morphemes can be further classified into three scalar types. And the orderings of four types of motion morphemes follow the Motion Morpheme Hierarchy and the Scalar Iconicity Constraint. This book offers a new perspective on examining motion verb classification and distribution, and targets at researchers and linguists who are interested in exploring motion event constructions across different languages.

The book is organized into six chapters. The first chapter defines the scope of the study and outlines the major proposals. Following a cognitive functional approach, the study adopts a scalar-based analysis in classifying and categorizing Chinese motion morphemes in the domain of self-agentive and non-agentive motion. At the end of the chapter, a brief overview and the major resources used for corpus analyses are provided.

Chapter 2 provides detailed information on Chinese motion verb construction by conducting an in-depth corpus analysis of Chinese novels. Following Packard (2000), motion verb constructions in Chinese can be classified into five types according to the number and morphological status of the morpheme(s) within each construction. For example, a motion morpheme can either be free (e.g., 进 jin, 'enter') or bound (e.g., 入 ru 'in'), based on whether or not it can stand alone as an independent element. Meanwhile, a motion verb

construction can either be mono-morphemic (e.g., 走 zǒu 'walk') or multi-morphemic (e.g., 追逐 'chase'), depending on whether a motion verb consists of one or multiple morphemes. Data from the corpus analysis further suggests that mono-morphemic verbs and two-morpheme MCVCs are the most common types of Chinese motion expressions. Regarding the MCVCs, a step forward is to investigate how different morphemes are classified and distributed within each construction.

As an elaboration of Chapter 2, Chapter 3 continues to explore the classification and the relative order of different morphemes in MCVCs. The chapter begins with a comprehensive review of current approaches on manner/path classification and points out potential problems that the current account failed to address. Due to the lack of systematic criteria, the classification of manner and path morphemes varies in different studies. For example, the same motion 钻 zuan 'squeeze' is categorized as a manner morpheme by Chen & Guo (2009), but as a path morpheme in Lamarre (2008). In addition, some linguists (e.g., Hsiao 2009; Talmy 2000) propose a third way of classifying motion construction, that is, a motion verb that lexicalizes both manner and path information (i.e. the MP verbs). However, several questions regarding this approach remain unsolved such as why the MP verbs in Chinese has a limited number with no more than five verbs under this category? And why MP verbs identified by different studies are not the same set of verbs? To provide a more unified and systematic account for manner and path classification, the current study provides an alternative approach by introducing two sets of semantic tests to examine the compatibility of a motion verb with a variety of manner adverbials and resultative expressions. Evidence from case studies (e.g., 掉 diao 'fall'; 沉 chen 'sink'; 逃 tao 'escape') further supports that rather than lexicalizing both manner and path within a single morpheme, motion verbs in Chinese exhibit a tendency of manner/path complementarity. Nonetheless, the book points out that the current two-way approach still cannot account for the relative order of morpheme distribution, that is, why a certain path morpheme must precede the other as illustrated by 落进 luo-jin 'fall-enter' but not *进落 jin-luo 'fall-enter'. In this sense, a finer-grained classification of motion morphemes is needed.

Chapter 4 and Chapter 5 constitute the core of the book. Given the unsolved issues in motion verb distribution, Chapter 4 proposes a four-way scale-based approach for manner/path classification. Following Rappaport Hovav and Levin (2010), a spatial scale refers to the relative distance between the figure and the reference object. From the dimension of distance, path of motion can be defined as several contiguous points located between the starting point and the reference point, which indicates changes along the scale. For example, 升 sheng 'ascend' denotes a change of scale in the vertical direction with reference to the ground,

whereas 跑 pao 'run' indicates no scalar change in the dimension of distance. In this sense, the former morpheme is classified as the path of motion (scalar change morpheme) while the latter as the manner of motion (non-scalar change morpheme). Different from Tamly's two-way classification, the scalar approach further classifies the path of motion into three sub-categories based on different types of the scale. A scale can be associated with boundedness, that is, whether or not a motion has an endpoint. For instance, 升 sheng 'ascend' is classified as an open scale morpheme due to the lack of a clear boundary whereas 进 jin 'enter' is a closed scale morpheme with an inherent endpoint such that a figure cannot move beyond it. Regarding the closed scale morpheme, it can be divided into two-point (beginning and end) and multi-point (multiple points between the beginning and the end) closed scale according to the punctuality of a motion. For example, 出 chu 'exit' is defined as a two-point morpheme as the motion itself is instantaneous and doesn't allow a durative adverbial. On the other hand, 回 hui 'return' is a multi-point closed morpheme because the process it denotes is gradual and takes time. To sum up, the four-way classification of motion morpheme is established upon three scaler features along a hierarchical continuum: [+/−Scale], [+/−Boundedness], and [+/−Punctuality]. As illustrated in Chapter 3, this chapter also employs a set of semantic tests to distinguish motion morphemes based on the four-way criteria. And these tests function effectively in classifying motion morphemes in Chinese, and the book further discusses some special morphemes with scalar changes such as 来 lai 'come'/去 qu 'go', 上 shang 'ascend to'/下 'descend from', 到 dao 'arrive' and 过 guo 'cross'. In addition, the study shows that the four-way approach is also applicable to bound morphemes.

Chapter 5 formulates the Motion Morpheme Hierarchy in predicting the possible orderings of motion morphemes and investigates the motivation behind it. As reviewed in Chapter 2 and Chapter 4, a motion construction in Chinese is composed of one or multiple morphemes with similar or different scalar meaning. Therefore, the relative order of each morpheme exhibits great diversities. In addition, the relative order of morpheme seems to be more difficult to predict when both morphemes encode scalar change. For example, the combination of 落进 luo jin 'fall-enter' is a commonly-used collocation but 进落 jin luo 'enter-fall' is an ungrammatical expression. To address the various orderings in motion expression, the Motion Morpheme Hierarchy proposes that the distribution of the co-occurring morphemes is arranged from left to right by a scalar-based hierarchy: morphemes with non-scalar change must occupy the left-most position and precede open scale morphemes, then followed by the closed scale morphemes (two-point and multi-point) and Group NP and/or complement. A comprehensive corpus analysis indicates that the Motion Morpheme Hierarchy holds true for most of the cases. This chapter then further goes into

the motivation of the hierarchy and proposes the "Scalar Iconicity Constraint". Semantically and conceptually motivated, the iconicity constraint proposes that a morpheme with more specific scalar information must proceed the one with less specific information. Different from the temporal iconicity constraint (e.g., Tai 1985, 1987, 1989, 2011), the constraint based on the scalar iconicity holds in the sense that the order of language elements reflects either the order in physical experience or the order of knowledge (cf. Greenberg 1966; Haiman 1980), and is able to explain the relative orders of motion morphemes that denote simultaneous sub-events. The final chapter revisits the major findings and suggests an agenda for future research. By conducting case studies, it extends the application of the scalar approach beyond the motion domain to a wider range of Chinese verbs, adjectives and prepositional phrases.

The book as a whole provides a finer-grained account for the lexicalization and distribution of motion morphemes in Mandarin Chinese. It revisits the manner/path classification by proposing a systematic scalar-based approach and combines it with independent sets of semantic tests. Motivated by the semantic and conceptual iconicity in the Chinese language, it also addresses the different orderings of motion morphemes by formulating a Motion Morpheme Hierarchy. In addition to the major findings for Chinese motion construction, the current work also sheds light on studies of motion construction in other languages and beyond the motion domain.

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