The Diachronic Evolution of Polysemous Motion Verbs in Chinese—A Case Study of Zǒu ‘Walk’*

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Abstract—Based on the actual uses of the polysemous motion verb zǒu ‘walk’ in the corpora of Chinese texts from Old Chinese to Modern Chinese period, this paper argues that the directed motion sense of the manner verb mainly derives from pragmatic inference from the contexts and cognitive preference for the conceptualization of motion events. In addition, it is essential that favorable morphosyntactic constructions in the language promote the pragmatic sense to be lexicalized as the verb’s lexical meaning. That is, the specific direction encoded in the verb and its grammatical behaviors are not fully determined by the lexical semantics of the verb itself as the grammatical constructions available in the language also account for the evolution of its lexical semantics and grammatical behaviors.

Index Terms—polysemous motion verb, pragmatic inference, morphosyntactic construction

I. INTRODUCTION

Motion verbs can be roughly divided into manner and path verbs. Though most of them fall into only one ontological type as either a manner or a path verb, some verbs do exhibit dual ways of categorization, i.e. they can be both manner and path verbs. For example, the verb zǒu ‘walk’, pǎo ‘run’ and fēi ‘fly’ in Modern Chinese can be either manner or path verbs. In Old Chinese, the verb zǒu ‘run’ can also be used as manner and path verbs. The questions are why these verbs demonstrate the dual ways of categorization; what are the possible factors affecting their distinct lexicalization patterns and further revealing the relation between lexical semantics and syntactic structures.

This paper starts with a survey of the semantic and syntactic evolution of the polysemous motion verb zǒu ‘run/walk’. Then the possible factors affecting its distinct ways of evolution are explored with the help of corpora of Chinese texts. In Old Chinese period, the uses of the verb are based on attested examples in three texts, Zuòzhūhuán, Hānfēīzì, and Shījī. In Middle Chinese period, four texts are looked up, which are Shíshùō xīnyǔ, Bàyàiyīng, Zàitāngjì, and Dānhuáng biānmèn. In Pre-modern Chinese period, Piáoshítōng yànjié, Lǎoqīdā yànjié, Rúlín wǎishí (the first 15 chapters) Hōnglōumèng (the first 30 chapters), and Ērnū yǐnxìóngzhūān (the first 10 chapters) are selected to examine directly. The data in Modern Chinese are mainly from the corpus of Modern Chinese constructed by the Center for Chinese Linguistics at Peking University.

II. THE EVOLUTION OF ZǑU ‘WALK’ IN ITS LEXICAL SEMANTICS AND GRAMMATICAL BEHAVIORS

Along the diachronic evolution from Old to Modern Chinese, the verb zǒu ‘run / walk’ has kept its polysemous nature constant, i.e. in both periods, it can be either a manner or a result verb. However, its grammatical behaviors and lexicalization patterns in the two periods are different. In Old Chinese zǒu ‘run/walk’ is primarily a manner of motion verb specifying prototypically human being’s way of motion: using legs to move quickly, as shown in (1). When it is used as a manner of motion verb, it shows the grammatical property of manner verbs in the way that it does not specify the direction of motion and thus compatible with verbs expressing varied directions.

(1) sèfū chí shùrén zǒu
lower.ranking.officers gallop common.people run

‘The lower ranking officers galloped and the common people ran about.’ (Zuòzhūhuán Zhāo Gōng 17th year)

In addition, it can also be used as a directed motion verb, since followed by noun phrases immediately as reference objects it can lexicalize the goal of motion, as in (2). It is also worth mentioning when it is used in the directed motion sense it has changed its ontological type from a manner verb to a directed motion one through tone alternation.

(2) fēng jūn yī zǒu gōnggōng
serve the king CONJ run Gu Palace

‘Serve the king to run to Gu Palace’ (Zuòzhūhuán Xiāng Gōng 23rd Year)

Zǒu ‘walk’ is also polysemous in Modern Chinese, but both the lexicalized meaning components and grammatical behaviors are different from its ancestor. To be specific, the lexicalized manner sense of the verb is not ‘run’ any more;

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rather it has been changed into ‘walk’. In addition, the directed motion sense has also evolved from a goal-oriented path ‘go to’ to a source-oriented path ‘departing from a reference object’. This change can be attested by the contrast between (2) and (3). In (2) above, the noun phrase ㄍㄨㄥ ‘Gu Palace’ is the goal of the motion, but (3) below describes a situation that a balloon flew away from a reference object, and thus the direction ㄓㄨㄛ ‘walk’ indicates the source of the motion ‘departure from a reference object’.

(3) ㄑㄧㄢ ㄓㄨㄛ le
   balloon  float walk ASP
   ‘The balloon flew away.’

The grammatical behaviors of the verb in two periods also form a clear contrast: whereas it can be followed immediately by noun phrases as references objects of the motion in Old Chinese as in (2), it cannot appear in this kind of constructions in Modern Chinese. Then the questions are: when and how the verb has changed its lexicalized meaning components and grammatical behaviors? Are these changes accidental or affected by certain factors in a systematic way? Can all these changes be explained simply by the lexical semantics of the verb itself?

To answer these questions, I first make comparison between the uses of the verb in Old Chinese period and Middle Chinese period to see whether there is certain evolution tendency which provides some clues for its change in lexical semantics and grammatical behaviors. I collect all the cases of its use as a motion verb in representative texts in both periods and then pick up the cases in which it is used as a goal-oriented path verb ‘go to’, i.e. when it is followed directly by noun phrases. The percentages of its use as a directed motion verb are calculated in both periods. The result is shown in Table 1.

### Table 1

| Period. Texts | No. of occurrence | Total number | ‘go to’
|---------------|-------------------|--------------|---------------
| Old Chinese  | Zuōchūn 37       | 484 (100%)   | 10 (177)      |
|               | Hánfēizì 50      |              | 9             |
|               | Shǐjī 397        |              | 158           |
| Middle Chinese | Shīshāo xīnyū   | 11           | 1             |
|                | Bǎiyáng 10       | 211 (100%)   | 7 (3%)        |
|                | Zhūnǎo 33        |              | 0             |
|                | Dānhuang biānwěn 157 |             | 6             |

As shown in Table 1, there is no doubt that the verb ㄓㄨㄛ ‘run’ is dominantly used in its manner sense, as in both periods the percentages of its directed motion sense are less than 40%. This confirms that the manner sense is its primary meaning. However, though its directed motion sense only takes a small percentage of all of its uses, the tendency related to the change in its lexical semantics can also be attested in the table. Its uses in the directed motion sense ‘go to’ in Old Chinese period takes 37% of all its uses as a motion verb, but in Middle Chinese period the goal-oriented path sense drops to only 3%. This means that the goal-oriented path sense of ㄓㄨㄛ ‘run’ is most often used in Old Chinese period, and it has greatly declined in Middle Chinese period.

Then the question is along the decline of the goal-oriented path sense of ㄓㄨㄛ ‘run’ whether the directed motion sense used in Modern Chinese ‘depart from a reference object’ also appears at the same time. The data show that it is not the case, since in Middle Chinese period there is hardly any case where the verb is used in the source-oriented path sense. The source-oriented path sense probably appears later. In order to better understand the evolutionary tendency of the lexical semantics of ㄓㄨㄛ ‘run’, the Pre-modern Chinese period is subdivided according to the periodization based on the alternations of dynasties and the uses of the verb in representative texts in different dynasties are compared. With respect to all of its uses as a motion verb, the percentages of the source-oriented path sense in representative texts in four different dynasties are calculated. The result is shown in Table 2.

### Table 2

| Period. Dynasty | No. of occurrence | Total number | ‘depart from a reference object’
|-----------------|-------------------|--------------|---------------------------------------
| Pre-modern      | sòng liū jīn 825 | 2 (0.2%)     |                                        |
|                 | yuàn 131          | 13 (10%)     |                                        |
|                 | mìng 422          | 44 (11%)     |                                        |
|                 | qīng 469          | 109 (23%)    |                                        |

It can be seen from Table 2 that at the beginning of Pre-modern Chinese, there is rarely any case of its use in the source-oriented path sense ‘depart from a reference object’. It provides evidence that the source-oriented path sense does not seem to be lexicalized in the verb until Pre-modern Chinese period. Though the percentage of its use in the source-oriented path sense is still relatively low in yuàn and mìng dynasties, it increases gradually. Approaching the end of Pre-modern Chinese period, the percentage increases to 22%. The data indicate that though from Pre-modern Chinese period the manner sense is still the dominant sense of ㄓㄨㄛ ‘walk’, but when used as a directed motion verb, the sense of
It has been uncovered so far that the verb zǒu ‘run/walk’ is dominantly used as a manner of motion verb throughout its evolution from Old to Modern Chinese, but its directed motion sense has changed in the process. Its goal-oriented path sense ‘go to’ is most often used in Old Chinese period, but from Middle Chinese period it greatly declined. From Pre-modern Chinese period, another directed motion sense ‘depart from a reference object’ has gradually been used.

III. FACTORS AFFECTING THE CHANGE OF THE LEXICALIZATION PATTERNS OF MOTION VERBS

With regard to the diachronic evolution of the verb zǒu ‘walk’, in this part I will try to analyze possible factors which may contribute to its lexicalization patterns in certain synchronic period and their diachronic development.

A. Pragmatic Inference and Cognitive Preference

Though from Old to Modern Chinese, zǒu ‘run/walk’ is dominantly used as a manner of motion verb, its manner sense has changed from ‘run’ to ‘walk’. It’s interesting that in spite of its different lexicalized manners in Old and Modern Chinese, the verb has developed a separate directed motion sense in both periods. Based on my analysis of its actual uses in the corpus, I will show that the emergence of its lexicalized directional sense is partly due to the pragmatic inference and cognitive preference related to the nature of motion event specified by the verb. Pragmatic inference related to a common core of manner of motion verbs such as run and walk shared by most languages promotes the emergence of its directional sense. Goal-biased cognitive preference in conceptualizing motion events can also partly explain the specific direction it encodes at different synchronic periods.

It is observed that manner of motion verbs have varied preference for directional interpretation (Bouchard, 1995; Nikitina, 2008). In spite of different lexicalization patterns related to language typology, manner verbs favoring directional interpretation seem to cluster together across languages. Levin et al. (2009) suggest a pragmatic account that directional interpretation of manner verbs can be explained by pragmatic factors such as the nature of the manner, aspect and ground/path properties related to motion events. Cross-linguistically manner of motion verbs which convey simpler and less elaborated manners are more likely to have directional interpretations than other ones. Verbs that describe shorter events than verbs describe a process with greater duration are more ready to express displacement.

As to the nature of manner encoded in zǒu ‘run/walk’, it fits the feature of the type of verbs favoring directional reading. The two possible manners encoded in zǒu ‘run/walk’ in Old and Modern Chinese, ‘run’ and ‘walk’, though different, are both major gaits of human’s motion and reflect the human beings’ conceptual structure of world (Malt et al., 2008). Like their counterparts in English, they are more likely to convey displacement, favoring a directional reading even without help of other path-indicating elements in a sentence. According to Rappaport Hovav and Levin (2015), though as to the lexical entailment, these verbs do not entail the path of motion, they lexicalize a manner that strongly suggests the displacement of an entity; they are what Talmy (2000, p. 261) calls “implied fulfillment verbs”. In this sense, they are different from manner of motion verbs like stomp and dance in English, which without help of other direction indicating elements, are unlikely to convey a directional sense. For example, as shown in (4), with run or walk as the main verb of the sentence, displacement of the figure is favored in (4a), but the figure’s in-place action is preferred if the main verb is replaced by stomp or dance in (4b).

(4) a. He ran/walked. (displacement favored)
   b. He stomped/danced. (in-place action favored)

This observation can also be confirmed when two different types of manner of motion verbs co-occur with locative prepositions. Though with proper contextual support, all manner of motion verbs in English can have directional interpretation, when followed by a locative prepositional phrase ‘in the room’, run and walk are more ready to have directional interpretation than stomp and dance, as shown in (5).

(5) a. John ran/walked in the room.
   b. John stomped/danced in the room.

Moreover, there is also cross-linguistic evidence for this observation. Similar situations have also been found in Spanish and Italian. Under favorable pragmatic contexts, verbs specifying similar manners of motion in Spanish such as volar ‘fly’, correr ‘run’, and caminar ‘walk’ as well as in Italian such as correre ‘run’ saltare ‘jump’, and volare ‘fly’ are more likely to have directional interpretations than other manner of motion verbs. (Fábregas, 2007; Folli & Ramchand, 2005; Levin et al., 2009). Cross-linguistic language acquisition also proves that these verbs belong to a subtype of manner of motion verbs which are inherent to displacement to a goal. The natures of manner they describe are characteristic of animate entities moving along with a goal to reach (Allen et al., 2007; Levin et al., 2009). In fact manners specified in the three motion verbs zǒu ‘run/walk’, pǎo ‘run’ and fēi ‘fly’ in Chinese generally fall into the subtype of manner of motion which prefer directional interpretation cross-linguistically. Therefore, strongly inferred directional interpretation from these verbs facilitates their lexicalization of the path sense.

However another fact concerning the directional sense of zǒu ‘run’ also needs to be noted, i.e. when it is used in directional sense in Old Chinese, it always specifies a goal direction ‘go to’. As shown in (6), the noun phrases following zǒu ‘run’ always indicate the goal of motion.

(6) a. qí hòu jià qiū, yǒutáng
    Qi duke ride.chariot will run Youtang
'The Duke of Qi rode a chariot and wanted to run to Youtang'  (Zuózhuàn Xiāng Gōng 18th Year)

b. bǎipú lǐ jū jiāng gè zǒu qí yì
Baipu scattered live each run his town

‘People of Baipu live in scattered communities and they would go back to their own town.’  (Zuózhuàn Wén Gōng 16th Year)

In (6), the two locative nouns ‘yóutáng ‘Youtang’ and yì ‘town’ following zǒu ‘run’ both unambiguously indicate the goal of the motion. Then one may wonder even though the nature of the verb and other semantic features of the motion events support a pragmatic inference of directional reading of the verb, why the verb encodes the goal rather than the source or other types of path schema and where the specific directional interpretation ‘go to’ comes from. Results from recent research on spatial semantics may help explain the puzzling problem. It has been demonstrated that there is a goal-bias cognitive preference in language. That is, the endpoint of motion receives asymmetrical emphasis over starting point or source of motion in terms of semantic and syntactic representation (Ikegami, 1987; Lakusta & Landau, 2005; Papafragou, 2010; Kabuta, 2013). This cognitive preference is reflected in both language structure and languages use. As to language structure, goal-oriented paths tend to be unmarked in languages, whereas source-oriented paths tend to be marked (Fillmore, 1997; lbara & Fujita, 2000; Jackendoff, 1983). For example, in many languages, unmarked and static places are more ready to be interpreted as goal-oriented path, but not source path. Fillmore (1997) notes that in the sentence ‘the cat ran behind the sofa.’ the complement ‘behind the sofa’ can be used either as a non-directional, locative place complement, or as a goal path complement, so the sentence is ambiguous in the way that it may have a goal-oriented directional motion reading ‘the cat ran to the a place behind the sofa’ or a in-place action reading ‘the cat ran in place behind the sofa’. However, it can never mean ‘the cat ran from behind the sofa’. Concerning language use, it is reported that goal paths are mentioned more often than source paths (Lakusta & Landau, 2012). Concerning to language use, Papafragou (2010) and Lakusta and Landau (2012) observe that goal configuration changes are detected more accurately than other paths information in language comprehension. In language production tasks, goal objects are also referred to more frequently by speakers.

In Old Chinese the goal direction specified by zǒu ‘run’ is partly motivated by the goal-biased cognitive preference. As a verb-framed language dominantly rendering the path schema into verbs, Old Chinese has a large path lexicon. More importantly, many of the path verbs describe goal-salient path schema and they require the goal arguments to be overtly expressed. Thus the most common syntactic structure these path verbs are used in is they are followed immediately by noun phrases indicating the goal of the motion. For example, goal salient path verbs in Old Chinese such as rá ‘go to’, shí ‘go to’, zhí ‘go to’, zào ‘arrive’, etc. all require the goal object to be expressed, as shown in (7).

(7) a. zhēngbō rú zhōu shì cháo huán wáng yé
Zhengbo go.to Zhou begin have.an.audience.with Huang Lord AFFIR. PART
‘Zhengbo went to Zhou and began to have an audience with the Lord Huan.’
(Zuózhuàn Yin Gōng 6th Year)

b. kǒng zǐ shī zhōu jiāng wén lǐ yú lǎozì
Confucius go.to Zhou will ask rites to Laozi
‘Confucius went to Zhou and wanted to ask Laozi about rites’
(Shíjī Lǎozì Hánfēi lièzhùan)

c. dàfū qiú mù wén zhī yǐ bīng zào gōng mén
grand.master Qiu Mu hear it with weapons arrive gate.of.the.lord’s.residence
‘Grand Master Qiu Mu heard it and went to the gate of the lord’s residence with weapons.’
(Shíjī Sòngwéizì shíjī)

On the one hand, the prevalence of goal-salient path verbs in Old Chinese and the corresponding syntactic structure in which they typically appear are the evidence that goal-biased cognitive preference is represented in the lexical semantics of verb lexicon in Old Chinese. On the other hand they also provide appropriate construction templates for the originally direction-neutral verbs to build goal direction inference.

Nevertheless, in Modern Chinese goal-biased cognitive preference is not reflected through the lexicalization of verbs in paths any more; rather it is reflected through finer-grained goal indicating directional complements such as jīn ‘enter’, huí ‘return’, dào ‘arrive’, shèng ‘ascend’, etc., since the dominant framing type of motion events has been changed from verb-framed to satellite-framed type. The goal direction lexicalized in zǒu ‘run’ gives way to specialized directional complements. As a result of the interaction between displacement-favored conceptual components in zǒu ‘run/walk’ and the property of directional verbal compound construction, it instead encodes another directed motion sense ‘depart from a reference object’.

B. The Change in Motion Event Framing Type and Morphosyntactic Structure

Though the pragmatic inference and the cognitive preference are important factors contributing to lexicalization patterns of motion verbs, these factors alone cannot completely explain the distinct lexicalization patterns of the verb zǒu ‘run/walk’. The actual lexicalization of certain sense of the verb is also affected by morphosyntactic structure available in the language. As shown in 5.1, along with the evolution of Chinese language, the lexicalized direction sense of zǒu ‘run/walk’ has not been kept unchanged. Approaching the Middle Chinese period, its lexicalized direction sense ‘go to’ in Old Chinese has greatly weakened and has virtually disappeared in Pre-modern Chinese period. Instead, another directed motion sense ‘depart from a reference object’ has been gradually lexicalized and consolidated. This line of
evolution cannot be completely explained only with the help of pragmatic and cognitive factors, since the conceptual components related to the verb haven’t changed much. In fact, it is also a result of the two-way interaction between the verb’s conceptual components and morphosyntactic structure available in Chinese. The arising and decline of goal path sense encoded in zǒu ‘run/walk’ is closely related to the availability of relevant morphosyntactic resources in certain synchronic period of Chinese language. This point can be seen from two perspectives.

First, as to motion event framing, the typical syntactic devices used to encode path schema affect the emergence and decline of the directed motion sense of zǒu ‘run/walk’. In Old Chinese period, Chinese is argued to be a verb-framed language, which dominantly renders the core schema path into verbs (Shi & Wu, 2014). The syntactic structure ‘path verb + goal object’, which is used to encode goal path, provides an ideal construction template for manner verbs like zǒu ‘run’ to enter the schematic slot of ‘path verb’ and acquire directed motion sense ‘go to’, analogical to other goal-bound path verbs. Thus it’s natural that it can encode the goal-oriented direction in Old Chinese.

However, from Middle to Pre-modern Chinese period, the framing type of the language has gradually evolved from verb-framed to satellite-framed, and the goal paths are more likely to be rendered into directional complements rather than main verbs. As a result of this typological shift, without overtly represented direction-indicating elements, manner verbs cannot encode goal path any more. It explains the gradual decline of the directed motion sense encoded in zǒu ‘run’ from Middle to Pre-modern Chinese period.

From the Pre-modern to Modern Chinese period, when the directional verbal compound (DVC) becomes the dominant syntactic structure to encode motion events, besides the core members of directional complements such as jìn ‘enter’, huì ‘return’, dào ‘arrive’, shàng ‘ascend’, etc., other less-prototypical verbs are also attracted to be used as satellites in DVCs. Since the conceptual component of zǒu ‘walk’ is also compatible with displacement interpretation, it becomes one of the newly developed candidates as directional complements in DVCs lexicalizing directed motion sense, though it needs to be noted that at this time the specific direction encoded in zǒu ‘walk’ has become ‘depart from a reference object’. The evidence that shows this evolution process is attested in Lamarre (2013). In her study, Lamarre (2013) analyzes the use of zǒu ‘walk’ as a directional complement from Pre-modern to Modern Chinese period and reveals that both the number of occurrence and the range of verb types it may follow have increased. In Pre-modern Chinese period, to express the meaning of ‘depart from a reference object’, the deictic verb qū ‘go’ is preferred to be used as directional complement. The use of zǒu ‘walk’ is only restricted to a narrow range of verbs and the number of cases in this use are also found to fewer than that in Modern Chinese.

Second, the evolution of the directed motion sense of zǒu ‘run/walk’ is also affected by the change of phonological and morphological system of Chinese. In Old Chinese, phonological derivation process provides proper morphosyntactic devices for the lexicalization of directed motion in zǒu ‘run’. In Old Chinese related words are considered to have been derivable by changing the phonological properties of a base word (Pulleyblank, 1995, p.10; Baxter & Sagart, 1998). In particular, based on the most clearly documented phonological derivation process, derivation by tone alternation, a new sense or a new grammatical function of a verb can be derived by changing the original tone into the departing tone. This kind of word derivational process makes it possible for a base verb to acquire a new sense or to change its categorical property without changing its written form. As to the derivation of path verbs from manner verbs in Old Chinese, the change concerning the verb’s lexical semantics and grammatical behaviors can be conveniently marked by altering the tone of the manner verb. The derived path sense of the manner verb zǒu ‘run’ is just an example of this derivation process.

(8) a. xùn lì yǎn ěr ér zǒu (tso) Xun Li cover ears CONJ run
   ‘Xun Li ran with his hands covering his ears.’ (Zuòzhuan Zhào Gōng 31st Year)

   b. zhào zhān qì chè zǒu (tso) lín Zhao Zhan abandon cart CONJ run forest
   ‘Zhao Zhan abandoned his cart and ran to the forest.’ (Zuòzhuan Xuān Gōng 12th year)

As shown in (8), when the original rising tone of zǒu ‘run’ ‘tso is changed into departing tone tso’, correspondingly the verb is changed into a path verb lexicalizing the goal direction of motion. In fact, as attested by researchers (Wang, 2013; Sun, 1997) in Old Chinese the derivation of path verbs from manner verbs is not restricted to zǒu ‘run’; other manner verbs such as qū ‘hurry up’, běn ‘rush’, chāo ‘surpass’ etc. also show this kind of lexicalization patterns, which demonstrates that the change in the semantic features and grammatical category of verbs can be marked by altering phonological property in a systematic way. This kind of morphosyntactic resources in Old Chinese facilitates lexicalization of the goal-oriented path sense in the verb zǒu ‘run’.

However, from Middle to Modern Chinese period, words in Chinese have undergone the processes of phonological simplification and disyllabification (Wang, 1980; Shi, 2002, among others), which are also thought to have effect on the lexicalization patterns of motion verbs. In Middle Chinese period, phonological system greatly simplifies and the phonological derivation system declines. As a consequence of the loss of this morphological inflection and complex tone system, the original contrastive pair of words which differentiates each other by phonological features cannot be distinguished and thus become homophones. Disyllabic words consequently arose within the language as a means of overcoming problems in communication caused by this proliferation of homophonous monosyllabic words (Lǚ, 1963;
Shi, 2002, p. 71). For polysemous motion verbs encoding both manner and result sense but differing each other only by tone properties like the verb zǒu ‘run’, the derived path sense is also suppressed for the same reason. Consistent with the disyllabification process, at the same period of time the lexicalization patterns of path schema of motion events have gradually changed from verb-framed to satellite-framed with goal-indicating path verbs becoming disfavored in encoding goal direction in motion events. This also promotes the decline of the goal-oriented path sense in zǒu ‘run’. Therefore, it can be seen that besides the conceptual components of verbs, the morphosyntactic structures do have effect on the possible lexicalizations of verbs. Both the emergence and decline of the goal sense of zǒu ‘run/walk’ are affected by the morphosyntactic structures available in certain synchronic period.

C. Grammaticalization of Directional Complements in DVCs

As discussed in the previous section, from Middle Chinese period the goal direction sense of zǒu ‘run/walk’ has gradually declined, and as to its grammatical behaviors it cannot be directly followed by locative nouns indicating the goal of motion. Then it can be used either as a prototypical manner of motion verb followed by directional complements, in (9) or as a bare verb in a sentence like (10).

(9) tā zǒu dào jìnsuī hē lǐ
     he walk arrive Jinshui River LOC
     ‘He walked to Jinshui River.’  (Piaoshitong yanjie)

(10) nà fù rén biăn zǒu le
     that woman then walk ASP
     ‘That woman then walked away.’  (Piaoshitong yanjie)

In the former case, zǒu ‘walk’ co-occurs with directional complements expressing varied directions. In (9), it appears with another path verb dào ‘arrive’ which indicates the arrival of a goal object and it can be seen that zǒu ‘walk’ does not specify the direction of motion in neither case, and this indicates that it is a pure manner of motion verb which does not specify any direction of motion in its lexical meaning.

However, in the latter case in (10), when it is used as a bare verb of the clause, there is no overt path-indicating element to specify the accurate direction of motion. Since the goal direction is suppressed and the nature of manner encoded in zǒu ‘walk’ implies the displacement of the theme, when it is used in this way, another direction of motion, i.e., the source-oriented direction, becomes more salient. Thus pragmatically it may associate with a default direction ‘depart from a reference object’. In fact, its source-oriented path sense just arises from the pragmatic meaning inferred from these cases.

From Pre-modern Chinese period, the further interaction between the directed motion sense of zǒu ‘walk’, ‘depart from a reference object’, and the construction meaning of directional verbal compounds leads to its grammaticalization as a source-oriented path morpheme. Before proceeding with this point, it is necessary to spend some time explaining the syntactic and semantic properties of the directional verbal compound (DVC) in Chinese. DVCs are a type of motion constructions in which two or three motion verbs are used together in adjacent positions with the second (and the third) one indicating the direction in which an entity moves as a result of action expressed by the first one. Because the direction in which an entity moves is also regarded as kind of result, DVCs are generally considered as a subtype of resultative verbal compounds (RVC), which are compounds consisting of two verbs with the second one indicating some result of the action or process conveyed by the first one. Though DVCs are different from RVC in some aspects, they share major syntactic and semantic properties. First, they both tend to express bounded events. In a RVC the second verb indicates the state the theme achieves, and in DVCs the second verb also marks the bound that the theme reaches or crosses in spatial relation. Second, DVCs like RVCs may form potential constructions by adding negative potential marker bù or positive potential marker de. Third, they are also one of the morphosyntactic strategies to express causative relation in Modern Chinese. As noted by scholars Modern Chinese does not have lexical and morphological causatives. Verbs which cannot express causative relation when used alone may be combined to form DVCs or RVCs to express caused motion or result. Verbs with lexical semantics compatible with the syntactic and semantic properties are more likely to be used in the two constructions. In fact, it is this compatibility between the lexical semantics of zǒu ‘walk’ and the DVC constructions that promotes the further consolidation of its source-oriented direction sense.

To summarize, throughout the evolution process of zǒu ‘run/walk’ from Old to Modern Chinese, its distinct lexicalization patterns in each synchronic period result from the interaction between conceptual meaning components of the verb and the available morphosyntactic structures in certain developmental period of Chinese language. The nature of the manner encoded in zǒu ‘run/walk’ promotes the pragmatic inference of displacement, which is the basis for further lexicalization of the directional sense in both Old and Modern Chinese. However, the specific direction lexicalized in the verb, goal or source of the motion, is also affected by the morphosyntactic properties of the language. In Old Chinese, goal-biased cognitive preference reflected at the level of verb lexicon, verb-framed framing type of motion events and morphological derivation process by tone alternation promote the actual lexicalization of the goal-oriented direction. In Modern Chinese, the suppression of goal path encoded at the level of verb lexicon, satellite-framed framing type of motion events, disyllabification of Chinese lexicon and the grammaticalization of directional complements in DVCs consolidate the lexicalization of the source-oriented direction.

IV. THE LEXICAL EVOLUTION OF ZǒU ‘WALK’ AS AN EPITOME OF THE EVOLUTION OF CHINESE MOTION VERBS
Though the polysemous motion verb  

zǒu ‘run/walk’  

has a distinct lexicalization patterns from other motion verbs, its lexical evolution processes from Old to Modern Chinese well reflect the general evolution trend of Chinese motion lexicon. The factors affecting its evolution processes can also account for the lexical evolution of other motion verbs. Though no other Chinese motion verbs have exactly the same lexicalization patterns or undergo similar evolution process as the verb throughout the history of Chinese language, in each period of time there are verbs which pattern with the motion verb in its lexicalization patterns.

For instance, in Old Chinese period when the verb  

zǒu ‘run’  

may lexicalize both manner and goal direction of motion, its dual-way ontological categorization is echoed by verbs which involve manners that are also likely to derive a pragmatic inference of displacement, such as qū ‘hurry up’ and bēn ‘rush’. These verbs are also polysemous, and their polysemous nature can be explained by factors that count for the lexicalization patterns of zǒu ‘run’. Similar to zǒu ‘run’, qū ‘hurry up’ and bēn ‘rush’ are also basic manner of motion verbs with high frequency of occurrence in Old Chinese. They typically describe motions featuring relatively high speed, carried out by human beings with an intention to reach a goal. Thus besides their primary manner sense, owing to their preferred pragmatic inference and favorable morphosyntactic devices (e.g. derivation through tone alternation) they also develop an independent goal-oriented path sense, which is also marked by their altered tone as the verb zǒu ‘run’.

The similar lexical evolution processes of the polysemous motion verbs and other path verbs in the later developmental stages of Chinese language also support this point. For example, from Middle Chinese period due to the change of the morphosyntactic structure of Chinese (e.g. phonological simplification, disyllabification, etc.) and its typological shift from verb-framed to satellite-framed language, the goal direction sense of zǒu ‘run’ becomes disfavored and declines greatly. Its lexical change in this line also parallels to lexical evolution of other motion verbs. The most conspicuous one is the parallel decline of those goal-oriented path verbs. Very similar to the verb zǒu ‘run’, most of these path verbs also lose their goal direction sense, though different from zǒu ‘run’ after they lose this sense they cannot be used as motion verbs altogether, because the goal path sense is the only meaning component encoded these verbs.

Therefore, though on the surface the lexicalization patterns of the polysemous motion verb discussed in this paper are different from other verbs, and the factors affecting its diachronic lexical evolution also seem to be unique, the data in Chinese indicate that the lexical evolution of the verb is an epitome of the lexical evolution of the entire motion lexicon. The factors related to the conceptualization of motion events, pragmatic use and typological features of the language at different synchronic periods have effect on the evolution of other motion verbs as well. The two-way interaction between the conceptual components of verbs and the morphosyntactic structure of the language is attested in lexicalization patterns of motion verbs in general.

V. CONCLUSION

The diachronic evolution of the verb zǒu ‘walk’ results from the interaction of various factors such as pragmatic inference and cognitive preference that the verb is associated with as well as the available morphosyntactic devices of the language in certain synchronic period. There is cognitive and pragmatic motivation for its distinct lexicalization patterns, but the morphosyntactic structures of Chinese at certain synchronous period also affect its actual lexicalization patterns. Verbal meaning and grammatikal constructions have two-way interactions. Not only the lexical semantics of verb determines what grammatical construction a verb may be used in, grammatical constructions may also affect a verb’s lexical meaning.

To view the diachronic evolution of the verb zǒu ‘walk’, it can be found that the distinct lexicalization patterns are not accidental; rather the evolution line is motivated by the similar mechanism. Both pragmatic inference obtained from the contexts in the process of language use and the favorable morphosyntactic structures are necessary conditions for the lexicalization of a new sense. Though the verb zǒu ‘walk’ is a manner verb and it is associated with displacement inference pragmatically, whether or not it may lexicalize certain directed motion sense depends on whether there is an invited pragmatic inference of the specific direction, on one hand. On the other hand, it also depends on whether there are proper morphosyntactic structures which could provide favorable devices for the lexicalization of the sense. Therefore, the distinct lexicalization patterns of the verb is motivated by various factors such as pragmatic inference, typological change of Chinese, the emergence or decline of certain grammatical constructions and grammaticalization of path-indicating elements in motion constructions. However, these factors affecting the lexical evolution of the polysemous motion verb may also be extended to account for the diachronic evolution of other Chinese motion verbs, so its evolution process represents an epitome of the evolution of the entire Chinese motion lexicon.

REFERENCES


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