



The diachronic evolution of directional constructions in Mandarin.

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List of abbreviations used in glosses.

abbreviation	meaning
1	1st person singular
2	2nd person singular
3	3rd person singular
ADV	adverb deriving suffix (see Li and Thompson 1982:322-323)
ASSOC	associative phrase marker (see Li and Thompson 1982:114-115)
CL	classifier
CONT	continuative aspect marker
CRS	current relevant state (see Li and Thompson 1982:238-299)
DISP	disposal form, <i>bǎ</i> 把 construction (see Li and Thompson 1982:463-491)
DUR	durative aspect marker
INCEP	inceptive aspect marker
INCH	inchoative aspect marker
NOM	nominalisation marker
ORD	ordinal
PART	particle
PASS	passive marker
PAST	past tense marker
PERF	perfective aspect marker
pl	plural
POS	possessive marker
PREP	the multi-purpose Old Chinese preposition <i>yú</i> 於
s	singular

Periods in Chinese history.

Western Zhou dynasty	1000-771 BC		
Spring and Autumn period	771-476 BC	Old Chinese	500 BC-AD 200
Warring States period	476-221 BC		
Qin dynasty	221-206 BC		
Han dynasty	206 BC-AD 220	Middle Chinese	AD 200-1000
Three Kingdoms period	AD 220-280		
Jin dynasty	AD 265-420		
Southern and Northern Dynasties period	AD 420-589		
Sui dynasty	AD 581-618		
Tang dynasty	AD 618-907		
Five Dynasties period	AD 907-960		
Song dynasty	AD 960-1279	Early Mandarin	AD 1000-1911
Yuan dynasty	AD 1206-1368		
Ming dynasty	AD 1368-1644		
Qing dynasty	AD 1616-1911	Modern Mandarin	AD 1911-present
Republic of China	AD 1911-1949		
People's Republic of China	AD 1949-present		

Note that not every dynasty ends precisely when another begins. This is because China has not always been united and so there may have been several independent kingdoms in the country at one time. In fact, even today there are competing Chinese governments. The dynasties listed above are supposed to represent the major kingdoms of each period.

1. Introduction.

1.1. Overview.

The aim of this thesis is to investigate the path of grammaticalisation of the directional constructions in Modern Mandarin from their roots in Old Chinese.¹ I show that the Modern Mandarin directional constructions have developed through successive stages of reanalysis from forms in Old Chinese that were created by directional verbs and various syntactic constructions operating in the language of the time. I describe the data presented by this research using a combination of grammaticalisation theory and Construction Grammar.

What I describe here as directional constructions are normally identified as *qūxiàng bǔyǔ* 趨向補語 ‘directional complements’ in most research into Chinese grammar.² I have avoided this term, however, since the directional forms that appear in Modern Mandarin do not have the properties of complements as that term is generally understood in modern syntactic theory. Complements are usually taken to be forms that fill argument slots of verbs (Crystal 1997:75), but, as is shown below, the directional forms in Modern Mandarin and other modern Chinese dialects do not fill argument slots. The term ‘directional construction’ is also more appropriate to the theoretical orientation of my analysis, as will become clear in the discussion below.

The most basic function of the directional forms in Modern Mandarin is to indicate the path of a motion event that is associated with the verb. This gives Modern Mandarin a ‘satellite-framed’ structure for the expression of manner and path in motion events, according to Talmy’s (1985; 2003) system of classification. An example of a motion verb qualified by a directional form is shown in (1) below. The directional forms have been underlined in the example.

(1) Directional construct in Modern Mandarin.

他們	從	孤獨	的	屋子	裡	走出來...
tā-men	cóng	gūdú	de	wūzi	lǐ	zǒu- <u>chu-lai</u> ...
3-pl	from	lonely	POS	room	inside	walk- <u>out-hither</u> ...

‘They walk out from inside the lonely room...’
(Lancaster Corpus)

¹ The periodisation of the Chinese language used in this thesis is discussed in section 1.3.1.

² Traditional Chinese characters are used throughout this thesis. It is necessary to use traditional characters when quoting pre-modern texts, since one simplified character often corresponds to several traditional characters that write different morphemes and if the simplified characters were used many important distinctions would be lost. I have decided to also use traditional characters for writing Modern Mandarin for the sake of typographical neatness.

In (1) the verb *zǒu* 走 ‘walk’ describes movement in space conflated with the manner of movement, and the directional forms *chū* 出 ‘out’ and *lái* 來 ‘hither’ indicate the path of the movement. *Chū* indicates that the movement is from inside to outside and *lái* indicates that the movement is in the direction of the speaker.³

The directional forms can appear alongside two classes of verbs in the language, verbs that describe independent motion events, and verbs that describe physical actions and which have affected patients. I call the verbs that describe independent motion events ‘displacement verbs’, following Li and Thompson (1981:58). Verbs in this class include *zǒu* 走 ‘walk’, *gǔn* 滾 ‘roll’ and *liú* 流 ‘flow’, which all describe self-agentive motion events conflated with manner. Other displacement verbs, such as *bān* 搬 ‘move’ and *rēng* 扔 ‘throw’, describe caused motion events, that is, events where an agent causes something to move by performing an action.

Some other displacement verbs have a latent motion event component that only becomes clear when they appear with the directional constructions. For example, the verb *dài* 帶 ‘carry’ alone does not necessarily imply movement, but when it appears with a directional form, such as *chūlái* 出來 ‘out-away’, as in (2) below, it has a clear motion event.

(2) **The verb *dài* with a directional form *chūlái*.**

你	為甚麼	不	敢	把	孩子	帶出來？
nǐ	wèishénme	bù	gǎn	bǎ	háizi	dài- <u>chū-lái</u> ?
you	why	not	dare	DISP	child	carry- <u>out-hither</u> ?

‘Why don’t you take your child out?’

(<http://www.fadmy.com/2006/3-13/14-52-51.html>)

The second class of verbs that can appear with the directional forms are those that describe physical actions with an affected patient but which do not necessarily imply displacement when they appear alone. When they appear with the directional forms, however, they clearly indicate caused motion. The verbs *dǎ* 打 ‘hit’ and *tī* 踢 ‘kick’ fall into this category. Examples of these verbs with directional particles carrying a motion and path interpretation are shown in (3) below.

³ Readers may notice that the directional forms in (1) have no tones marked but that the forms cited in this paragraph do have tones marked. The forms cited do have tones underlyingly but these tones are not realised in the construct in (1). The reasons for this are discussed in section 2.2.

(3) **The physical action verbs *dǎ* and *tī* with a motion interpretation.**

- a. 詹姆斯 把 球 打出來。
Zhānmùsī bǎ qiú dǎ-chu-lai.
James DISP ball hit-out-hither.
'James hit the ball out.'
(<http://live.sports.people.com.cn/live/note.php?id=1867>)
- b. 怎麼 把 我 踢出來 了 啊？
zěnmē bǎ wǒ tī-chu-lai le a?
why DISP 1s kick-out-hither PERF PART?
'Why have you kicked me out?'
(<http://bbs.0731fdc.com/showthread.php?t=70197>)

The directional constructions in Modern Mandarin can combine with either of the classes of verbs outline above, displacement verbs and transitive physical action verbs, and have their basic spatial senses.⁴ This is discussed in more detail in chapter 2. Some of the directional forms can also combine with verbs that do not fall into these two categories. In these cases the directional forms take on extended senses that are derived from their basic senses through metaphor. An example of a directional form with an extended metaphorical sense is shown in (4) below.

(4) **A directional form with a metaphorical meaning.**

- ...還是 沒 時間 把 它 寫出來。
...hái-shì méi shíjiān bǎ tā xiě-chu-lai.
...also-is not.have time DISP 3.s write-out-hither.
'...and also that he doesn't have time to write them out.'
(Lancaster Corpus)

In (4) the directional form *chūlái* 出來 reinforces the notion that the writing on the page came into being as a result of the event 'writing' described by the verb *xiě* 寫. This is perhaps an instance of the metaphor 'to be outside is to be produced'. There are a very large number of these metaphorically extended meanings, which are attached to a range of different directional forms. The metaphorically extended meanings of the directional forms are discussed in section 2.3. The emergence of these metaphoric meanings is a significant stage in the grammaticalisation of the directional constructions, as is shown in section 4.3.

Under my analysis, which is built on the foundation of the theory of Construction Grammar (see section 1.2.1 for an outline of this theory), there are two sets of constructions that are responsible for

⁴ Note that the Mandarin directional forms collocate with similar classes of verbs to English directional particles. Each of the examples discussed above has a direct English equivalent: (1) 'walk out', (2) 'carry out', (3a) 'hit out' and (3b) 'kick out'.

creating the directional forms that appear in Modern Mandarin. These are the directional particle constructions and the syntactic directional constructions. The directional particle constructions produce the lexical directional forms that appear in the sentence and the syntactic constructions produce the syntactic structures that the lexical forms appear in. I refer to these two sets of constructions together as the ‘directional constructions’. This analysis is elaborated on in chapter 2.

Each of the directional particles is derived from a basic motion verb in the language. In each case the original basic motion verb continues to exist alongside the derived particle. For example the particle *lái* 來 ‘hither’, which appears in (1) above, is derived from the motion verb *lái* 來 ‘come’. Examples of the motion verb *lái* ‘come’ are provided in (5) below.

(5) **Directional verb constructs.**

- a. 24 午前， 我們 來 這裡 採訪， 舉目 黃沙 茫茫， 不見 樹木。
 èr-shí-sì wǔqián, wǒ-men lái zhèli cǎifǎng, jǔ-mù huáng-shā mángmáng, bú-jiàn shùmù.
 24 morning, 1-pl come here investigate, raise-eye yellow-sand blurry, not-see tree.
 ‘On the twenty-fourth morning, we came here to investigate. We raised our eyes to have a look and there was a blurry expanse of yellow sand, not a tree in sight.’
- b. 藏花 說： ‘才 會 想到 來 這裡 淋淋雨。’
 zànghuā shuō: ‘cái huì xiǎng-dào lái zhèli lín-lin-yǔ.
 Zanghua said: ‘and.then can think-reach come here relax.
 ‘Zanghua said, “And so you finally thought to come here to relax.”’
 (Lancaster Corpus)

The Chinese writing system obscures the details that serve to distinguish the Modern Mandarin directional particles from their corresponding directional verbs. If we were to rely solely on the written form of the sentence in (1) above, it might seem that the directional particles are simply directional verbs like those shown in (5a) within a serial verb construction. Serial verb constructions of many different types are well recognised in Modern Mandarin, making this seem even more probable. However, there are a few key differences that clearly indicate the directional particles are not the same as their corresponding verbs. In the syntactic environment shown in (5b), where *lái* immediately follows another verb, the directional particles are always pronounced in the neutral tone (Chao 1968:436-437; Lamarre ms:7). This feature of the particles is discussed in section 2.2.3. The directional verbs, on the other hand, are always pronounced in one of the four Modern Mandarin tones. Many of the directional particles also have reduced argument structures, while the verbs do not. For example, in both examples in (1) above the verb *lái* ‘come’ introduces the location argument *zhèli* 這裡 to the clause. The directional particle *lái* ‘hither’ could never introduce a location argument to the clause (Lamarre ms:10-11). These features of the directional particles are discussed in detail in section 2.2.

The relationship between each directional particle and its corresponding full verb remains synchronically transparent in Modern Mandarin. For example, the motion verb *lái* ‘come’ describes

a motion event towards a deictic centre typically anchored at the location of the speaker or some other key participant, and the directional particle *lái* ‘hither’ describes a path towards the same deictic centre. The particles retain all the path semantics of their corresponding verbs but do not have the ability to act as independent predicating elements. Instead, they must always appear as satellites to other verbs.

It should be remembered that even though we are looking at the development of these constructions from the perspective of their current state in Modern Mandarin, this does not mean that their current state represents some sort of evolutionary endpoint or even a stage on the way to an evolutionary endpoint. There is no final developmental stage that languages are moving towards. Every language changes constantly over time. The changes that take place are conditioned by a number of factors, which are mostly not under the conscious control of speakers of the language (for a detailed discussion of these points, see Harris and Campbell 1995:17-19 and Hopper and Traugott 2003:19-25). Although we are taking the present state of the directional complement constructions as our starting point and looking at how the language has evolved to reach this point, this is not because the present state is some goal that the language — or speakers of the language — has been striving to achieve, but simply because this is the latest point that has been reached in the evolution of these constructions.

1.2. Theoretical background.

This thesis draws on several theories current in modern linguistics to ground the analysis of the data. Below each of these theories and their contribution to the analysis is discussed.

1.2.1. Construction Grammar.

I will present my analysis of each synchronic stage in the development of the directional constructions within the framework of construction grammar, a theory of grammar that has mostly grown out of the work of Charles Fillmore and his colleagues. The theory has many adherents, who each have their own version of it (see, for example, Croft 2001; Fried and Östman 2004; Goldberg 1995; Kay and Fillmore 1999). Below I will give a brief account of the general features shared among all versions of Construction Grammar and some of the details of the particular version of the theory I will use in my description.

Construction Grammar originally arose as an attempt to provide a theory of grammar that could account for both the most frequently occurring grammatical structures (ie, ‘core language’ as it was called in 1980s Government and Binding theory) as well as more idiomatic expressions (‘peripheral language’) using the same descriptive framework (Fillmore, Kay and O’Connor 1988:501-503; Kay and Fillmore 1999:1-2). This effort ran counter to the dominant theory of the day, Government and Binding theory, which saw core language as the only proper object of study for linguists, since it was

considered to be the product of universal grammar, while peripheral language was merely a largely unstructured collection of idiomatic expressions that must be memorised by speakers (Chomsky 1986:147). Practitioners of Construction Grammar rejected the division between core language and peripheral language, citing the fact that there is a great deal of regularity and structure visible in many forms that were normally assigned to peripheral language. Construction Grammarians maintain that core language and peripheral language are the products of the same basic principles that utilise the same psycholinguistic faculties.

Construction Grammar also sought to strengthen the connection between particular syntactic forms and their semantic and pragmatic interpretations (Fillmore, Kay and O'Connor 1988:501-502; Fried and Östman 2004:12; Kay and Fillmore 1999:4). Many formal theories of grammar continue to assume a modular model of language. Syntax, phonology, semantics, pragmatics and so on are seen as belonging to autonomous modules that interact with each other to produce linguistic output. The actual linguistic form that appears on the surface is merely the epiphenomenal product of the underlying rules of grammar. In Construction Grammar, by contrast, every form is bound up with its semantic and pragmatic interpretation. This is in fact what is meant by 'construction' in this theory, a unique combination of a form and its semantic and pragmatic interpretation.

There is no distinction between the lexicon and syntax made in construction grammar. All unique forms that carry a unique semantic or pragmatic interpretation are constructions, whether they are morphemes, words or syntactic structures. Even intonation patterns, such as the rising intonation used in English to mark yes/no questions, are constructions (Croft 2001:16-17; Goldberg 1995:1-5). There are 'lexical constructions' and 'syntactic constructions', but there is no fundamental difference between them. They are both instances of the basic grammatical entity of construction, which binds form with semantic and pragmatic interpretation.⁵

The endeavour of Construction Grammar to treat core and peripheral grammar as one and to bind form and meaning together has resulted in a theory that uses the same theoretical principles and formalisms to describe highly idiomatic syntactic constructions with specified lexical content, such as the *X, let alone Y* construction, used in sentences like 'I doubt you could get Fred to eat squid, let alone Louise' (Fillmore, Kay and O'Connor 1988), and the *What's X doing Y?* construction, as in 'What is it doing raining?' (Kay and Fillmore 1999), in the same way as more regular rules of syntax, such as the English ditransitive construction (Goldberg 1995:141-151) and the determination construction of the English noun phrase (Fried and Östman 2004:36-37). In Construction Grammar each of these forms is a construction. They combine a unique grammatical or lexical form with a unique semantic and pragmatic interpretation.

⁵ Note that this means that we can refer to the constructions that produce lexical forms as 'verb constructions' and 'particle constructions', as I do in this thesis. The term construction does not necessarily signify a syntactic construction within this theory.

Linguistic form is shaped by the interaction between the different constructions in the grammar of a language. Constructions unify to build up the representation of a sentence. In an ideal Construction Grammar representation, there is a one-to-one correspondence between the observed linguistic form and the constructions that represent that linguistic form. There is no abstract layer of deep structure that is transformed to produce a surface form (Fried and Östman 2004:25). There is only the surface structure, which is called a construct. Every construct is built up by the unification of constructions.

Starting from this common foundation, the various practitioners of Construction Grammar have developed the theory in different directions according to their own beliefs about the structure of grammar and the requirements of the particular grammatical problems that they analyse. For example, Goldberg (1995) is primarily concerned with constructions that influence argument structure in English, such as the ditransitive construction and resultative constructions. Her system of Construction Grammar is finely tuned for describing these types of problems. Croft (2001) is mostly concerned with providing a framework for describing the different typological structures of the world’s languages, and his version of Construction Grammar reflects this preoccupation.

In this paper I will draw on the version of Construction Grammar set out by Fried and Östman (2004). I will also use the formalisms that they provide. I have decided to use their version of Construction Grammar because it has the broadest descriptive scope of any published version of the theory. It also aims to be a valid and practical framework for cross-linguistic description.

Fried and Östman use a formalism that involves box diagrams. Formalisms of this sort are well-established in Construction Grammar (see, for example, Fillmore 1988). In this formalism each construction is represented by a box. Within each box is a list of the features, attributes and values that define that construction. A box diagram of the Old Chinese verb construction **thjut* [chū] 出 ‘move.out’ is shown in figure 1.1 below.⁶ This diagram is taken from figure 3.3 in chapter 3.

Figure 1.1 Typical Old Chinese verb construction.

syn	[head [cat v] level [lex +,max []]	Verb ‘*thjut (chu)’
sem	[frame CHU(move out) FE #1 [mover] FE #2 [place moved from] ...]	
val	{#1[rel [θ agent]], #2[rel [θ source]]}	
lxm	[THJUT]	

The verb construction shown in figure 1.1 exhibits most of the features and attributes used in this thesis and so provides a good example for explaining them. The names of the features are all listed in the leftmost column: syn(tax), sem(antics), val(ence) and lxm (lexeme). To the immediate right of

⁶ The reconstructed pronunciations given for Old Chinese are according to Baxter (1992).

each of these features are bracketed attribute-value matrices. The attribute-value matrices contain more detailed specification of each of the features. Below I will describe each of the features in turn.

The *syn(tax)* feature is possessed by all constructions. It contains the attributes that specify the syntactic status of the construction. The attributes that are specified within this feature are *head* and *level*. Although the *head* attribute appears first in figure 1.1, I will describe it after the *level* attribute, because this will make the discussion clearer.

The attribute *level* describes the level of the phrase structure that the construction unifies at. It contains two sub-attributes, *lex* and *max*. *Lex* indicates whether the construction is lexical or phrasal. A lexical construction has a lexical form and belongs to the sub-syntactic level of the clause, while a phrasal construction has no form of its own and unifies with lexical constructions to create phrase constructs (note, however, it is possible to have composite constructions that both have lexical content and unify with other lexical constructions to build phrases). A lexical construction is indicated by the attribute-value pair *lex +* and a phrasal construction by *lex -*.

The attribute *max* (maximal) indicates whether a construction is maximally expanded or requires further expansion. In (6) below are some examples of forms of English verb constructions with their specifications for *lex* and *max* that illustrate the use of the attribute *max*.

(6) **Permutations of the attribute-value pairs *max* and *lex*.**

- a. [lex +, max +] maximal lexical construction *sang*
- b. [lex +, max -] lexical construction *sung*
that must be expanded
- c. [lex -, max +] maximal phrasal construction *can sing*
- d. [lex -, max -] phrasal construction *been*
that must be expanded *singing*

(Fried and Östman 2004:31)

In the examples in (6) above, the specification *max +* indicates that the verb constructions *sang* and *can sing* are maximally expanded. Further elements cannot be added to these verb forms. **Has sang* or **has can sing* would be ungrammatical. Conversely, the attribute-value pair *max -* indicates that the constructions *sung* and *been singing* need further expansion. The forms generated by the constructions would be ungrammatical if they appeared alone in the sentence. They require expansion into *has sung* and *has been singing* (Fried and Östman 2004:31). The attribute *max* is often left unspecified (*max []*) in descriptions in this thesis. When the attribute is unspecified it means that the construction can be expanded, but it does not have to be.

The *head* attribute contains information about the head of the construction.⁷ It contains the sub-attribute *cat*, which indicates the syntactic category the construction belongs to. In the case of the construction shown in figure 1.1 above, that category is *v* (verb). Some other categories that will be encountered in this thesis include *n* (noun) and *dir.part* (directional particle). The syntactic category of a phrasal construction is always the same as that of its head, and so the normal endocentricity of phrases is captured.

The semantics feature contains the attributes that specify the meaning of the construction. The most important of the attributes in the case of verbs is the *frame* attribute, which indicates the semantic frame the construction belongs to. The notion of semantic frame comes from Fillmore's (1982) theory of frame semantics, which claims that every word in a language belongs in one or more conceptual networks with other words. The meaning of each word is determined by its relationship to the other words in the networks. The idea of conceptual network is particularly pertinent to verbs, since the network provides a schematic representation of the situation the verb describes, which includes all the participants that are associated with the situation. For example, the Old Chinese verb **thjut [chū]* shown in figure 1.1 above has two key participants in its semantic frame, a mover and a place that is moved from. It also contains many other participants, which are not overtly specified in this diagram and may not be realised in a sentence, but are always understood to be associated with the situation because they belong to that semantic frame. The participants of situations described by verbs are specified with the attribute *FE* (frame element) that follows the *frame* attribute.

Each frame element in the semantic frame of the verb is linked up to a *rel(ation)* attribute within the *val(ence)* feature. The relation attribute bundles semantic roles with grammatical functions and other attributes that are relevant to arguments. Semantic roles are described in θ attributes within the relation attribute. Each frame element is linked to its corresponding relation through a linking index, indicated by a number preceded by a hatch (#). So in figure 1.1 the mover frame element is linked to the agent semantic role through the linking index *#1* and the place moved from is linked to the source semantic role by the index *#2*.

Grammatical functions also play a role in the descriptions presented in this thesis. The grammatical functions I refer to are *subject* and *object*.⁸ These functions are assigned to relation

⁷ All constructions have a head attribute specified, whether they are lexical constructions or phrasal constructions. It may seem odd to specify a head for a monomorphemic lexical construction, since it is non-composite and so is not made up of multiple constituents, one of which can serve as the head. Monomorphemic lexical constructions must have a head attribute that is specified in the same way so that their attributes can be matched up to those of other constructions. If constructions had their attributes specified in different ways then it would not be possible to recognise the same attributes across constructions.

⁸ Note that the notions of 'subject' and 'object' as they are defined for European languages cannot necessarily be directly applied to descriptions of Modern Mandarin (see LaPolla 1993). However, in Modern Mandarin there are certainly grammatical functions very similar in nature to the subject and object of European languages, and so I use these terms.

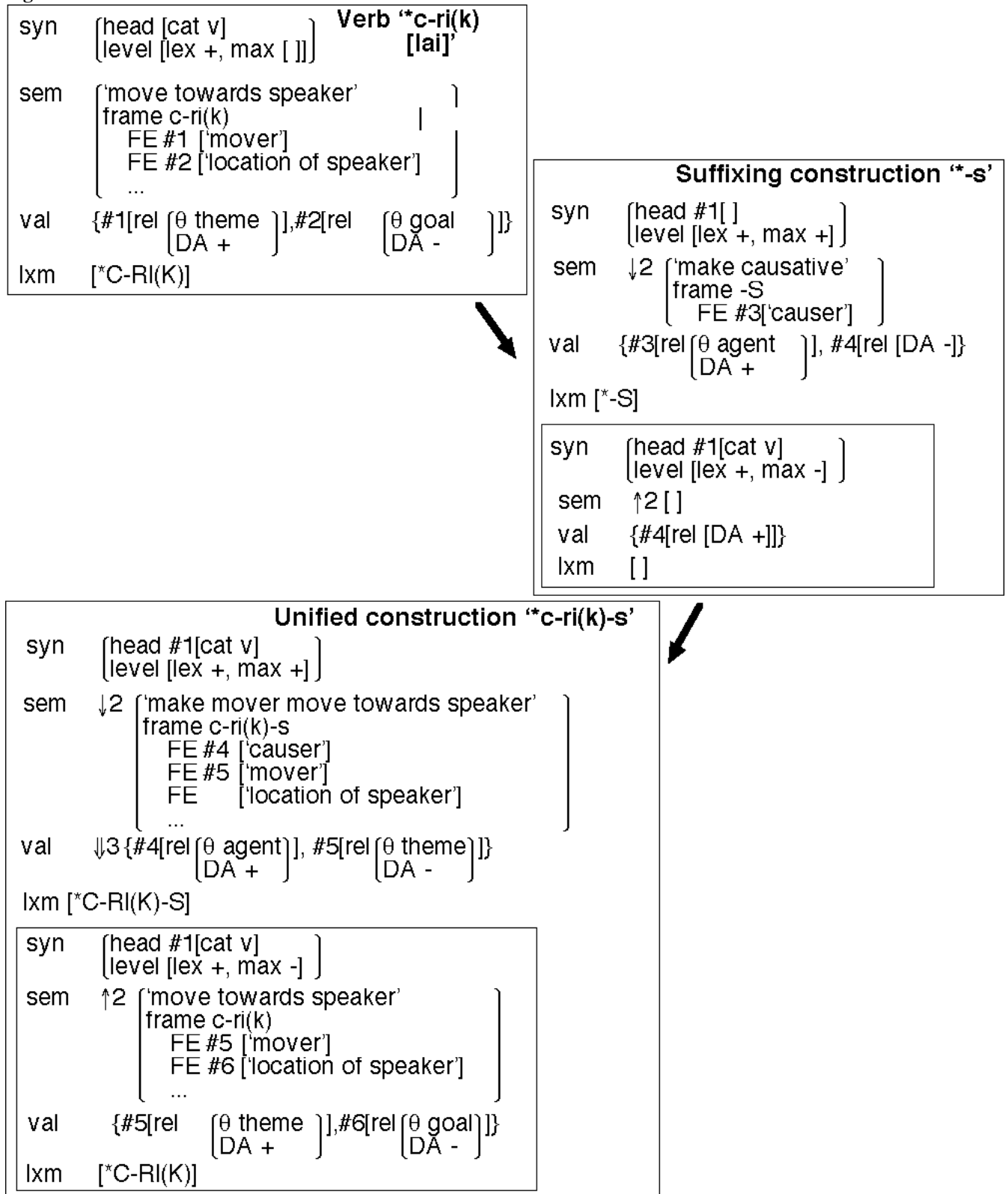
attributes contained within the valence feature of a verb. I make specific reference to these functions in some constructions. The usual method employed in Construction Grammar for linking semantic roles to grammatical functions is to posit grammatical function assigning constructions. These constructions assign grammatical functions to the arguments in a verb construction's valence that are marked as *DA +* (distinguished argument +) and *DA -* (distinguished argument -). The distinguished argument + and distinguished argument - are the most thematically prominent arguments in the verb's valence.

Different grammatical function assigning constructions will act differently in terms of which grammatical function they assign to which distinguished argument. Constructions associated with active voice will assign the argument marked as *DA +* to subject and *DA -* to object and constructions associated with passive voice will assign the *DA -* argument to subject and force the *DA +* argument to become an oblique. For example, in the valence feature of an intransitive verb, there will be only one relation attribute that describes one argument. This argument will be marked as *DA +*, no matter whether the intransitive verb is unergative or unaccusative, since in the varieties of Chinese investigated here it seems that the sole argument of an intransitive verb will always be realised as a subject when other pragmatic concerns do not intervene. To take some Old Chinese verbs as examples, the unaccusative intransitive verb *sǐ* 死 'die' has an argument with the semantic role of patient in its valence, which is marked as *DA +*. The unergative intransitive verb *dùn* 遁 'flee' has an agent argument that is marked as *DA +*. These two *DA +* arguments will become subject. In a transitive verb like *shā* 殺 'kill' there is an agent argument and a patient argument. The agent is marked as *DA +* and the patient as *DA -*. Constructions associated with active voice will link the argument marked as *DA +* to subject and the argument marked *DA -* to object. For more information on argument linking constructions, see Fried and Östman (2004:46-57).

The *lxm* (lexeme) feature appears in all lexical constructions. It simply contains the lexical form of the construction that appears in the construct. For example, in the case of the verb construction **thjut* [*chū*] shown in figure 1.1 above, the form it provides for the final construct is **thjut*, indicated in the lexeme feature.

Constructions combine to produce the surface construct through the process of unification. Fried and Östman (2004) describe several different types of unification, but I only make active use of one kind. In this thesis unification occurs when a construction has the right attributes to fill a child construction slot within another construction. To make this clear, look at the flowchart of construction unification provided in figure 1.2 below. This flowchart is taken from figure 3.4 in chapter 3

Figure 1.2 Unification of constructions.



In figure 1.2 above the verb suffixing construction *-s ‘make causative’ (centre right) unifies with the verb construction *C-ri(k) [lai] 來 ‘come’ (top left) to produce the construction *C-ri(k)-s ‘make come’ (bottom left). The suffixing construction *-s has one child construction slot (the box

within the outer box). The head and level attributes within the syntactic feature of the child construction slot are specified with the sub-attributes *cat v*, *lex +* and *max -*. This indicates that any construction that belongs to the syntactic category of verb and is a lexical construction that can be further expanded can fit into this slot. The other features of the construction are left unspecified (marked with empty brackets []), indicating that this construction makes no stipulation regarding the attributes that appear in these features. A construction with any attributes within these features can fill the child unification slot. It will contribute its own attributes and values to the unspecified features. The construction **C-rĭ(k)* ‘come’ has attributes that match those specified in the child construction slot and so it can unify with the suffixing construction **-s* by filling the child construction slot.

The box diagram at the bottom of figure 1.2 represents the construction that is produced by the unification of these two constructions. In this diagram the features in the child construction slot are fully specified with those of the verb construction **C-rĭ(k)* ‘come’, since that construction has unified with the parent construction.

Note that the *max* attribute of the verb construction **C-rĭ(k)* [*lái*] is left unspecified, but the *max* attribute of the child construction slot in the suffixing construction is specified as *max -*. The verb construction can unify with this child construction slot since its *max* attribute is unspecified and so can have either the value + or the value -. The suffixing construction cannot unify recursively with its own child construction slot, however, since its *max* attribute is specified as *max +*.

The head of the suffixing construction is the verb construction that unifies with the child construction slot. This relationship is expressed by the government index #1. This index means that the value of the attribute *cat* in the parent construction must be the same as the value of the *cat* attribute in the child construction. Since the *cat* attribute is unspecified in the parent construction, its value will become *v* to match the value *v* of the *cat* attribute in the child construction.

In the verb suffixing construction **-s* ‘make causative’ in figure 1.2 the semantic integration arrows (↓↑) indicate that the semantic attributes of the child construction are integrated with the parent construction. The semantic feature of the parent construction therefore takes on the attributes specified in the child construction in addition to its own. So the semantic feature of the unified construction in the bottom of the diagram has the semantic attributes of both the verb suffixing construction and the verb construction.

The government index #4 in the **-s* ‘make causative’ construction indicates that the DA + argument of the child construction should be linked to the DA - argument of the parent construction. This has the effect of demoting the DA + argument of the child construction to DA - in the parent so that the agent argument that is introduced by the parent construction can be marked as DA +. Any other arguments in the valence of the child construction are not linked into the parent. The result of this argument linking, which can be seen in the diagram of the unified construction at the bottom of figure 1.2, is that the agent argument introduced by the suffixing construction is marked as DA + in

the parent, the theme argument from the verb construction is marked as DA -, and the goal argument in the child verb construction does not appear in the parent at all. The agent argument is therefore in position to become the subject and the theme argument is in position to become the object in a normal active sentence.

The verb suffixing construction shown here is a morphological construction. That is, it operates at the level of morphology. This is shown by the way that its external syntactic features the level attribute contains the sub-attribute *lex +* (word level constituent). It also operates by unifying with constructions at the word level, a verb construction with the attribute *lex +*. It is also possible to have constructions that operate at the level of syntax. These constructions always have the attribute *lex -* (not a word level item) in their external syntax feature, since they always produce phrases. The child constructions they take may be either word level constructions or other phrase constructions.

There are a few typographical conventions that are used to make the formalism easier to read and write. Attributes that are placed within quotes, such as the attribute 'move towards speaker' in figure 1.2 above, are attributes that are expressed in plain English rather than with a set formalism. It is often simpler to write some attributes in plain English rather than devising a complete formalism when making descriptions. The attributes that are expressed in this way tend to be semantic and pragmatic attributes, since the formalism is not fully developed for the representation of these features. Ellipsis marked with three full stops '...' is also often used to indicate that a full description has been omitted. It is often clearer not to write all the attributes of a construction out when producing box diagrams, since these can clutter up the diagram and obscure the point being made. Attributes that are not explicitly written out are not immediately relevant and are usually predictable from the other attributes in the diagram.

1.2.2. Grammaticalisation theory.

Grammaticalisation is the process through which content-bearing forms in language lose their original meanings in certain contexts and come to take on more grammatical functions, such as indicating aspect, tense and mood or case distinctions. The process can also affect forms that already have grammatical meanings, in which case they come to take on even more grammatical meanings. This shift in function is usually accompanied by a reanalysis of syntactic class and a reduction in form. Grammaticalised forms are often drawn from major syntactic classes like nouns and verbs and become members of minor classes. Many forms even lose their independence as words altogether and become clitics and affixes. They also usually have a pronunciation that is shorter and less distinct than the form they are derived from. The reduction in phonological form and the loss of wordhood are complementary processes. Reduced forms cannot serve as independent words because they are not salient enough when uttered in isolation, and clitics and affixes generally have lighter forms than independent words so that they can form a single prosodic unit with their host word.

A classic example of a grammaticalised form, as Hopper and Traugott (2003:2-3) point out, is the phrase *be going to* in English, which is used to mark future tense and has the syntactic behaviour of an auxiliary. *Be going to* originated from verb phrases built around the verb *go* where the verb takes a non-finite verb phrase complement with an activity verb as its head. In its original sense *be going to* meant that the actor was moving from one place to another in order to do something, a purposive directional meaning. This is shown in (7) below.

(7) **Original purposive directional sense of English *be going to*.**

I am going to marry Bill.

(Hopper and Traugott 2003:2)

There is a conversational implicature of futurity in utterances like those in (7). At some point the sense of futurity was reinterpreted as the main sense attached to the form. This was possible since the expression *be going to* without an overt locative phrase is not unambiguously directional. The reanalysed form was then extended to be used with non-activity verbs, as in (8). The reanalysed meaning of *be going to* is clear when it is used with non-activity verbs because the original purposive directional meaning is very improbable. It is unlikely that the actor would move from one place to another in order to like Bill. The speaker is simply using the expression *be going to* to indicate futurity.

(8) **Grammaticalised future tense marker *be going to*.**

I am going to like Bill.

(Hopper and Traugott 2003:3)

As the meaning of the expression changed its form was reanalysed. Originally a sentence like that in (7) would have been made up of a verb phrase *go* containing a complement phrase *to marry Bill*. The sentence would be bracketed [I am going [to marry Bill]]. Once the expression *be going to* is reinterpreted as a marker of future tense, the entire complex becomes an auxiliary and the sentence would be bracketed [I am going to marry Bill]. When the phrase is reanalysed *be going to* also loses its progressive aspect interpretation and becomes a marker of future tense only. After this reanalysis has taken place, the form of the expression can be reduced from *going to* to *gonna*. The complementiser *to* that originally belonged to the complement phrase following the verb can be reduced along with the verb because as a result of the reanalysis there is no longer a phrasal bracket between the verb and the complement phrase.

Grammaticalisation was first recognised as a diachronic process in language by nineteenth century Indo-Europeanists. The term ‘grammaticalisation’ was coined in 1912 in a paper by the Indo-Europeanist Meillet (Hopper and Traugott 2003:19). In the twentieth century there was a substantial amount of research into the phenomenon, which was mostly connected to the work of

Indo-Europeanists. In the later twentieth century linguists belonging to various schools of generative grammar began to take an interest in grammaticalisation, leading to a number of theoretical accounts of it (for discussion of the history of grammaticalisation as a field of research, see Harris and Campbell 1995; Hopper and Traugott 2003).

The process of grammaticalisation has also been observed in traditional Chinese philology, where it was usually called *xūhuà* 虛話 ‘emptying’.⁹ In the Yuan Dynasty (AD 1271-1368) the philologist Zhou Boqi observed, following a line that was later independently pursued in Europe and was associated with the glottogonic view of language evolution (Harris and Campbell 1995:17-19), that ‘大抵古人製字，皆從事物上起。今之虛字，皆古之實字。’¹⁰ (Zhou Boqi, *Liùshūzhèngé* 六書正訛, quoted in Zheng and Mai 1964:95). In the following centuries studies of the transition of particular ‘solid words’ to ‘empty words’ became a major concern, reaching its peak in the Qing Dynasty (AD 1644-1911; Shi 2002:5). Note, however, that unlike in the Western tradition, the Chinese scholars maintained their discipline as a lexical study — there was no attempt made to generalise the changes they observed to devise a theory of grammaticalisation.

Grammaticalisation proceeds through the two processes of reanalysis and analogy. Reanalysis is typically characterised as the reinterpretation of particular surface forms as being the products of different rules of grammar or lexical items with different properties from those that a speaker originally used to create them (Hopper and Traugott 2003:50-52; Harris and Campbell 1995:61). A hearer encounters a possibly ambiguous utterance, such as *be going to* in a context where there is no overt location, and they assume that its meaning is different from the meaning conventionally associated with the form. In this case a purposive directional meaning would have been originally intended, but the meaning is reinterpreted as one of futurity. The meaning of futurity was originally only a conversational implicature associated with the form. With the reanalysis of the meaning, the form is also reanalysed as belonging to the syntactic class of auxiliaries, which contains forms like *will*, *should* and so on. Once the reanalysis has been made, both analyses may continue to exist in the language. Over time the new analysis may come to dominate and eventually replace the original analysis. When this occurs this reanalysis has gone to completion. A complete reanalysis like this usually proceeds through several steps.¹¹ Many reanalyses do not go to completion, but continue in a state of variation. English *be going to* falls into this category, since the original purposive directional meaning and the future auxiliary meaning coexist in the modern language.

⁹ This term focusses on the the ‘semantic bleaching’ of grammaticalised words, a major feature of grammaticalisation that has also been observed in the Western tradition (see Hopper and Traugott 2003).

¹⁰ ‘Mainly when the ancients made words, they started from matters and things. Today’s empty words (grammatical words) all come from ancient solid words.’

¹¹ The steps through which the reanalysis proceeds are called ‘actualisation’. See Harris and Campbell (1995:77-91).

The second process for effecting grammaticalisation is analogy. Analogy is the generalisation of a rule or lexical item so that it applies in more environments than it could previously. Unlike reanalysis, which creates new rules or new lexical forms with different underlying properties, analogy merely extends the distribution of a pre-existing rule or lexical item (Hopper and Traugott 2003:63-64). If we return to the example of English *be going to*, shown in (7) and (8) above, analogy can be seen to have operated there. The expression *be going to* was initially reanalysed in the specific context of purposive directional phrases where there was no overt direction expressed. Analogy then applied to extend the distribution of the reanalysed auxiliary *be going to* so that it could occur with other types of verbs besides verbs of activity. It could then appear with stative verbs like that in (8) above.

Harris and Campbell (1995:102-103, 114) have attempted to formalise a process they call 'extension', which corresponds to analogy as it is described here in most ways, as the removal of conditions on the use of rules and lexical items. Conditions are structural or lexical requirements that must be met before a rule or lexical item can be used. So in the example of English *be going to* above it is a condition of the newly reanalysed lexical item that it must appear with activity verbs. Once this condition is removed its distribution expands.

Conditions are a part of individual rules or lexical items. Their removal therefore amounts to a kind of reanalysis. Hopper and Traugott (2003:68-69) have observed that analogy and reanalysis are similar processes in that they both involve modifying rules or the properties of lexical items in the language. The difference between the two processes is that reanalysis is driven by the reinterpretation of ambiguous forms and analogy is driven by processes that regularise the structure of the language based on the rules and lexical items that are already extant.

Analogy is a way in which reanalysis becomes apparent. As long as the reanalysed auxiliary *be going to* was restricted to occurring with activity verbs, it was not always clear that it was being used as a marker of future tense. As soon as the distribution of the form was extended through analogy and so could appear with other types of verbs besides activity verbs, it became clear that the form had been reanalysed. When the form *be going to* appears with stative verbs, the original purposive directional meaning is highly improbable and so it is clear that it must signify some other meaning.

For the purposes of this thesis I have to slightly recast the descriptions of reanalysis and analogy given above, which characterise reanalysis and analogy as change in the properties of lexical items and syntactic rules. These notions are incompatible with Construction Grammar, since in Construction Grammar both the lexical items and syntax are described as constructions. Reanalysis and analogy should be considered as the change in the attributes of constructions that produce a construct. Reanalysis is still effected by the same means, however. Hearers encounter a particular construct and they assume that it is produced by the unification of constructions with different features from those that the speaker actually used to create it. The hearer may then produce their own constructs based on the new constructions that they have created and that they assumed the first speaker used. Likewise, analogy is still motivated by paradigmatic levelling in the language.

In discussing the diachronic development of the constructions under examination, I will present a Construction Grammar analysis of each synchronic stage in their development and then discuss what features changed from one stage to the next and the factors that may have influenced that change. This approach is based on Saussure's (1972[1983]:87-89) metaphor of language as a game of chess. Each synchronic stage is represented by a certain configuration of pieces on the board. Diachronic change is what happens when a piece is moved, creating a new synchronic configuration. This metaphor has many shortcomings. Unlike configurations on a chess board, there are no clear states in the history of language that match up to moves in a game of chess. Every language is in a constant state of flux with a large amount of variation among speakers and even within the speech of a single speaker. This metaphor does not capture the true nature of diachronic change, but it does provide a useful model for conceptualising that change for the purposes of analysis.

There is a tension between my Construction Grammar analysis and the theories of historical language change presented above that are based on the conception of language as a collection of lexical items and a system of rules. These approaches to language seek to formulate maximally general rules that will produce all the structures observable in language output. Any forms that cannot be explained by general rules are considered 'peripheral' and beyond the scope of regular grammar. Construction Grammar, on the other hand, embraces the idiomatic. Like these approaches, it also aims to make the most general descriptions possible, but, since there is no division made between the idiomatic and the regular, the constructions posited tend to be more fine-grained. The result is a microscopic rather than a macroscopic view of the grammar of the language, with a proliferation of constructions.

The precise details of what might drive the processes of reanalysis and analogy have also been discussed extensively in the literature (see, for example, Harris and Campbell 1995; Hopper and Traugott 2003; Kiparsky 2005). Ultimately, such questions come down to what causes variation and change in human languages. I will not deal with this issue on a universal level, however when it is clear that one particular diachronic change, such as the simplification of syllable structure, is driving another change, such as syntactic or morphological reanalysis, I will discuss this. I believe that it is only through accumulating an inventory of descriptions of particular diachronic developments that generalisations can be made about universal tendencies.

1.2.3. Cognitive semantics.

The theory of cognitive semantics, as developed by George Lakoff and his collaborators (Lakoff and Johnson 1980; Lakoff 1987), is based on the notion that there are deeply ingrained metaphors that structure every aspect of language, from lexical semantic networks to grammatical structures. For example, one metaphor that seems to be operating in English is 'happy is up; sad is down' (Lakoff and Johnson 1980:15). This metaphor arises in expression like 'I'm feeling *up*' and 'You're in *high*

spirits.’ The converse, ‘sad is down’, appears in expressions like ‘I’m feeling *down*’ and ‘I *fell* into a depression’.

I subscribe to the central tenet of cognitive semantics, that non-literal expressions that have a similar form to more concrete expressions can generally be related back to the concrete expressions through networks of metaphorical connections. I use this principle in trying to find metaphors that could have structured the development of the various non-literal senses attached to the directional forms that have emerged in the history of their development.

1.3. Methods.

1.3.1. Approach and problems.

My method in conducting this research has been to assemble a diachronic corpus of texts that are considered to be representative of the current written language at the time they were produced. I have then searched the corpus for target forms and analysed and compared these forms to examine the evolution of the directional constructions. My initial searches were carried out on electronic versions of the texts in the corpus using regular expressions. Each example found in the electronic texts was then checked against authoritative printed editions to ensure the philological accuracy of the examples and the validity of my interpretations of them.

I have attempted to choose texts for the corpus from different periods in the history of the Chinese language. The periodisation that I have used in determining the historical divisions of Chinese is that of Sun (1996:3). I have used his periodisation because it is based on observed syntactic developments in the language. Sun’s periodisation is shown in table 1.1 below.

Table 1.1. Periodisation of Chinese language.

period	date
Old Chinese	500 BC-AD 200
Middle Chinese	AD 200-1000
Early Mandarin	1000-1900
Modern Mandarin	1900-present

At times in the body of this thesis I have to refer to sub-periods within this scheme, such as the ‘early Middle Chinese period’ or the ‘late Middle Chinese period’. When I refer to these sub-periods in the thesis I give reasons for subdividing the period and explicitly delimit the sub-period to a particular time.

Problems with this periodisation also appear when I discuss reconstructions of the Old Chinese phonological system. The reconstruction I use is designed to represent the pronunciation of the *Shījīng* 詩經. The *Shījīng* is chosen as the target for phonological reconstruction because it is a poetic text and many of the poetic devices used within it, such as rhyme and metre, provide valuable clues for reconstruction. The various poems contained in the *Shījīng* are dated from around 1100 BC to 600 BC, which is outside the Old Chinese period as it is defined by Sun. The latest date is around a hundred years before the first text in my corpus, the *Zuǒzhuàn* 左傳 (ca 475 BC). I still take the reconstructions based on the *Shījīng* as being representative of the pronunciation of the texts in my corpus from the Old Chinese period, however, since the difference in time is not too great. In any case, there are no complete phonological reconstructions available for the time between the *Shījīng* and the Middle Chinese period. I have not used the *Shījīng* as a source for syntactic analysis since, as a poetic text, its syntax is potentially distorted by poetic devices.

The issue of dialects within the Chinese language also presents a problem for the data in my corpus. The modern ‘Chinese language’ is probably best characterised as a group of related regional varieties, usually referred to as dialects, even though many of the varieties are not mutually intelligible. The diversity of the Chinese dialects extends far back in time. In the Old Chinese period there were probably already several Chinese dialects, some of which may not have been mutually intelligible (Norman 1988:183). There are rarely enough texts from earlier varieties of the language extant for the historical linguist to choose a particular dialect to study. It is also not always clear what ancient dialect a particular historical text represents. Most of the texts I have used in my corpus do come from the northern part of the country, however. Since they are from approximately the same geographical area, I can assume reasonably safely that they represent the continuation of approximately the same dialect.

The range of texts appropriate for this research is also constrained by the conservative nature of the Chinese literary tradition. From the end of the Han Dynasty (206 BC-AD 220) to the beginning of the Republic of China (AD 1911-1949), most literary works in China were written in a special literary language *wényán* 文言 that aimed to imitate the language of texts from the Classical period, which roughly corresponds to the Old Chinese period. These texts do exhibit historical variation but they are not very good indicators of how the language was evolving since they are attempting to emulate the language of an earlier period. Alongside these texts there are many texts that are written in a style called *báihuà* 白話, which is more closely connected to the spoken language of each period. It is texts that fall into this category that I have used in my corpus, since they provide a better picture of the living language at the time they were written, even though they still belong to a written register.

One problem that I have faced, and which is faced by all historical linguists, is the paucity of the data. Synchronic linguists who are working on a living language have the advantage of being able to ask informants whether particular forms are grammatical or not. This allows them to test all the possible parameters when formulating a grammatical description of a language. Historical linguists

do not have this luxury. The historical linguist has to rely solely on the attested data, although they can sometime supplement it with what they know of modern varieties of the language. This puts a limit on the certainty of any historical analysis, especially in situations in which there is only a small amount of attested data.

1.3.2. Texts.

Below I provide a brief description of each of the texts in my corpus, with dates and approximate number of characters. I also list references to printed editions of each of the texts. The texts are grouped according to period. It will be noticed that the corpus is relatively small. Most serious corpora tend to have several million words, while each period in my corpus has only a few hundred thousand words at most. The small corpus size has the potential to make some analyses difficult to perform and the results inaccurate. In addition to the small size of the corpus, there is some variability in the size of samples from each period. For example, the Old Chinese section is around 700,000 characters, while the modern is only 48,000 characters. The text types contained within the corpus are also not always the same in each of the periods. When problems engendered by these factors arise I point them out and attempt to deal with them.

For the Old Chinese period I use the two texts the *Zuǒzhuàn* 左傳 (ca 475 BC, around 200,000 characters) and the *Shǐjì* 史記 (ca 91 BC, around 500,000 characters). These two texts are histories that record important political events in the ancient Chinese world. These texts are useful to compare for the purpose of seeing developments within the grammar of the language because they belong to similar genres and also because many of the events recorded in the later text, the *Shǐjì*, are directly retold from the *Zuǒzhuàn* in the language of the later time. My source for the text of the *Zuǒzhuàn* is Yang (1981) and my source for the *Shǐjì* is Takikawa ([1934]1982).

During the course of this research it became clear that the Middle Chinese period was the key period for the development of the directional constructions. Because of this, I selected more texts from this period to enable me to make a finer-grained analysis of how the forms changed during this time. For the early Middle Chinese period (ca AD 220-618) I selected two texts, the *Shìshuōxīnyǔ* 世說新語 (ca AD 420-444, approximately 54,600 characters) and the *Bǎiyùjīng* 百喻經 (ca AD 483-494, approximately 17,500 characters). The *Shìshuōxīnyǔ* is a work of fiction that records the daily lives of members of the literati class. The *Bǎiyùjīng* is a collection of Buddhist parables designed for the moral education of novice monks. It is a translation of a Sanskrit book *Satavadana*. The *Bǎiyùjīng* must be used with some caution, since the translation may be influenced in some ways by the source language. My source for the *Shìshuōxīnyǔ* is Liu (1996) and my source for *Bǎiyùjīng* is Zhou (1993).

For the late Middle Chinese period (AD 618-1127) I draw on the texts *Dūnhuángbiànwén* 敦煌變文 (ca AD 907-1127, approximately 230,000 characters) and *Zǔtángjí* 祖堂集 (ca AD 952, around

120,000 characters). *Dūnhuángbiànwén* is a selection of texts inspired by Buddhist teachings from the late Tang Dynasty (AD 618-907) and Five Dynasties period (AD 907-1127). These texts were discovered in the early twentieth century in a cave network attached to a Buddhist monastery at Dunhuang in western China. *Zǔtángjí* is a collection of records detailing the activities at a Zen Buddhist monastery in Fujian Province. The *Zǔtángjí* has to be used with some caution, since the language contained within it is probably best regarded as representing a mixed variety spoken at the monastery by monks from different regions, rather than a variety that is ancestral to Modern Mandarin (see Mei 1997 for discussion of this issue). My sources for the *Dūnhuángbiànwén* is Wu (1996), and for *Zǔtángjí* is Zhang (2001).

For the Early Mandarin period I have chosen the texts *Zhūzǐyǔlèi* 朱子語類 (AD 1270, around 38,600 characters), *Piáotōngshì yánjiě and Lǎoqìdà yánjiě* 朴通事諺解老乞大諺解 (ca AD 1400, around 16,200 characters) and *Rǔlínwàishǐ* 儒林外史 (early 18th century, around 276,000 characters). *Zhūzǐyǔlèi* is a collection of the conversations of the latter-day Confucian master Zhuxi. *Piáotōngshì yánjiě and Lǎoqìdà yánjiě* are textbooks designed for Korean students to learn the standard northern Chinese of the time (Yuan Dynasty, AD 1271-1368 and early Ming Dynasty, AD 1368-1644) for business purposes. *Rǔlínwàishǐ* is a satirical novel that recounts the story of a young aspiring scholar and which attacks the Confucian elite of the era. My sources for these texts are Wu (2003) for the *Zhūzǐyǔlèi*, Dyer (1983) and Kang (1985) for *Piáotōngshì yánjiě and Lǎoqìdà yánjiě*, and Wu (1958) for *Rǔlínwàishǐ*.

For the Modern Mandarin period I have used the Lancaster Corpus of Mandarin Chinese. The Lancaster Corpus is made up of written material from a range of different genres, including newspaper reporting, various types of fiction, scientific prose, essays and so on. All the texts in the corpus were published within two years of 1991 in mainland China. The corpus contains around 48,000 characters altogether. The corpus is an electronic resource, so there is no printed reference to refer to. The best source of information on the corpus is its web site (<http://bowland-files.lancs.ac.uk/corplang/lcmc/>, 21/05/2006). Where the Lancaster Corpus has not been able to provide suitable examples of grammatical forms in Modern Mandarin, I have supplemented it with examples judiciously selected from grammars of Mandarin and actual attested data on the internet.

1.4. Outline of chapters.

I begin by examining the directional constructs and the constructions that produce them at the two ends of the time period being researched. Chapter 2 looks at the present state of the directional forms in Modern Mandarin. Chapter 3 goes back to the Old Chinese period to look at the directional forms attested in the language of the time, which were later reanalysed through successive stages to create the modern constructions.

After looking at the extreme ends of the time period, I examine the various stages of reanalysis the directional forms in the Middle Chinese period underwent to create the basic directional construction found in Modern Mandarin. This is covered in chapter 4. Chapter 5 investigates how the combined particle constructions and the potential constructions, whose development is related to the basic directional constructions, came into being. Finally chapter 6 presents a summary of the data and analyses presented in the body of the thesis and the conclusion.

2. Directional constructions in Modern Mandarin.

2.1. Introduction.

This chapter looks in more detail at the directional constructions in Modern Mandarin. The key features of the constructions and the main points of variation among them are discussed in section 2.2. The metaphorically extended meanings that are attached to some of the directional constructions are discussed in section 2.3.

The directional constructions in Modern Mandarin are related as a group to other constructions in the language. The relationship between directional constructions and other constructions in the language is discussed in section 2.4.

2.2. Classes of directional constructions.

The directional particles can be divided into two main classes based on the features they share. These two classes are in turn associated with various syntactic constructions. Below I present a classification of the directional particles and their syntactic constructions. My taxonomy is informed by the classifications of Chao (1968:458-467), Li and Thompson (1981:58-65), Ohta ([1958]1987:200-210), Liu (1998) and Lamarre (ms). It should be noted that the constructions in each class outlined below do not have identical features. The classes are probably better thought of as being ‘radial categories’, as that term is used by Lakoff (1987), where some constructions are more prototypical members of a class than others. This point will be elaborated on in the discussion below.

2.2.1. Class one directional particles.

The first class of directional particles indicate a path that is oriented around a deictic centre that is usually based on the location of the speaker. In discourse where the speaker does not feature as a participant, such as some narrative discourse, the deictic centre may be oriented around the location of some key participant that is not the speaker (Liu 1998:3-4). The class one particles, unlike the class two particles, also completely lack any argument structure of their own, and so cannot introduce any arguments to the predicate (Lamarre ms:10). This point is explained below. There are two directional particles in the first class. Their forms and meanings are shown in table 2.1 below.

Table 2.1. Class one directional particles.

form	gloss of particle	gloss of corresponding verb
<i>lái</i> 來	‘hither’ — towards the speaker	come
<i>qù</i> 去	‘thither’ — away from the speaker	go

The usage of these constructions can be seen in (1) below. In (1a) the actor walks towards the speaker. The action of walking is expressed by the verb *zǒu* 走 and the path towards the speaker by the directional particle *lái*. In (1b) the actor’s hand moves away from him as he reaches out to stroke the mirror. The action of stroking is expressed by the verb *měn* 捫 and the path away from the actor by the directional particle *qù*. In (1b) the deictic centre is not the speaker but the actor, since this construct is drawn from a narrative told in the third person where the speaker does not feature as a participant.

(1) **Class one directional particles.**

- a. ...只見 一位 体格 魁偉、 滿臉 胡子 的 中年人 朝 我們 走來。
 ...zhǐ-jàn yí wèi tǐgé kuíwěi、 mǎn-liǎn húzi de zhōng-nián-rén cháo wǒ-men zǒu-lái.
 ...only-see one CL body great full-face beard ASSOC middle-aged-person towards 1-pl walk-hither
 ‘...I could only see a great middle-aged man with a full beard walking towards us.’
- b. 當下 他 不假思索地 伸手 向 鏡 上 捫去...
 dāngxià tā bùjiǎsīsuǒ-de shēn-shǒu xiàng jìng shàng mén-qu...
 at.that.moment 3.s off-hand-ADV extend-hand towards mirror top stroke-thither
 ‘At that moment he off-handedly reached out and stroked the mirror...’
 (Lancaster Corpus)

The class one directional particles can appear in two different syntactic configurations, the inseparable configuration and the separable configuration (cf. Li and Thompson 1981:62). In the inseparable configuration, shown in (1) above and in (2a) below, the verb and directional particle form a syntactic compound. No constituents can appear between the verb and particle and if a speaker is interrupted while saying the form and they want to repair the utterance, they cannot repeat it from part way through but must repeat it from the beginning (Chao 1968:436-437). In the separable configuration, on the other hand, shown in (2b) below, the verb and directional particle do not form a compound. This can be seen in the way that other constituents can appear between them, like the aspect markers *le* 了 and *zhe* 著 and noun phrases that realise objects.

(2) **Class one inseparable construct.**

- a. 一個 又 一個 农村 婦女，
yí-gè yòu yí-gè nóngcūn fùnǚ,
one-CL again one-CL village woman,
從 家裡 帶來 新 蒸 的 白麵 饅頭...
cóng jiā-lǐ dài-lái xīn zhēng de bái-miàn mántóu...
from home-inside carry-hither new steam NOM white-flour bread.
'One by one the village women brought out the freshly steamed bread rolls from their houses...'

Class one separable construct.

- b. ...果真 帶 了 些 文件 來。
...guǒzhēn dài le xiē wénjiàn lái.
...it.turns.out carry PERF some document hither.
'...and in the end he brought some documents over.'
(Lancaster Corpus)

Directional particles that appear in the inseparable configuration, shown in (2a) above, are always pronounced in the neutral tone, while those in the separable configuration are pronounced with their full tonal values. This subtle difference in realisation conceals a great difference in underlying character. The particles that appear in the inseparable configuration cannot be separated from their verbs and do not have the realisation of full prosodic words in that they have no tone. This suggests that they are not independent syntactic or phonological words but clitics. The particles in the separable configuration can appear separate from their host verbs and do have a full tonal value, however. This suggests that they are independent syntactic and phonological words.

Despite the difference in syntactic and phonological features that is apparent between the particles that appear in the separable and inseparable configurations, the semantic attributes of the particles in both these configurations are comparable, if not identical. The two directional forms in (2) above both describe paths towards the speaker that are associated with the events described by the verbs. It is also difficult to find a difference in meaning between the separable and inseparable structural configurations. Most linguists who have studied them claim that there is no difference in semantics or pragmatics between the two configurations (see, for example, Li and Thompson 1981:64; Shi 2000:161). However, others, like Liu (1998:40-45), believe that the alternation between the two configurations can indicate a difference in whether the event described by the verb is realised (*yǐrán* 已然) or not realised (*wèirán* 未然). This is essentially a distinction between perfective and imperfective aspect. When the event is realised, it is understood to have occurred and to be complete, when the event is not realised, it is understood as not yet having occurred or being in the process of occurring. When the separable configuration is used, the event described can be either realised or not realised, but when the inseparable configuration is used the event is typically realised. The distinction Liu proposes is quite obscure. This is perhaps a reason why it has escaped detection by most other linguists, many of whom are

native speakers. More evidence is needed to establish this distinction conclusively, however. Suitable evidence can only be found through an extensive search in a large corpus of Modern Mandarin texts. I will not commit to any theory on the possible difference in meaning between the separable and inseparable structures.

The two configurations with their two sets of particles, the clitic-like particles and the independent particles, represent two competing forms for expressing basically the same meaning that have separate origins. In Modern Mandarin, however, these two forms for expressing the same meaning have become intertwined. This will become apparent in the Construction Grammar description of the forms I provide below.

The basic construction required for creating directional forms in Modern Mandarin like those shown in (1) and (2) above is the directional particle construction. A box diagram of the directional particle construction *lái* ‘hither’ is shown in figure 2.1 below.

Figure 2.1 Diagram of a class one directional particle construction.

syn	[head [cat dir.part]] [level [lex +,max[]]]	Directional particle ‘lái’
phon	[pros.word +]	
sem	[‘indicate path towards speaker or other key participant’]	
lxm	[LAI]	

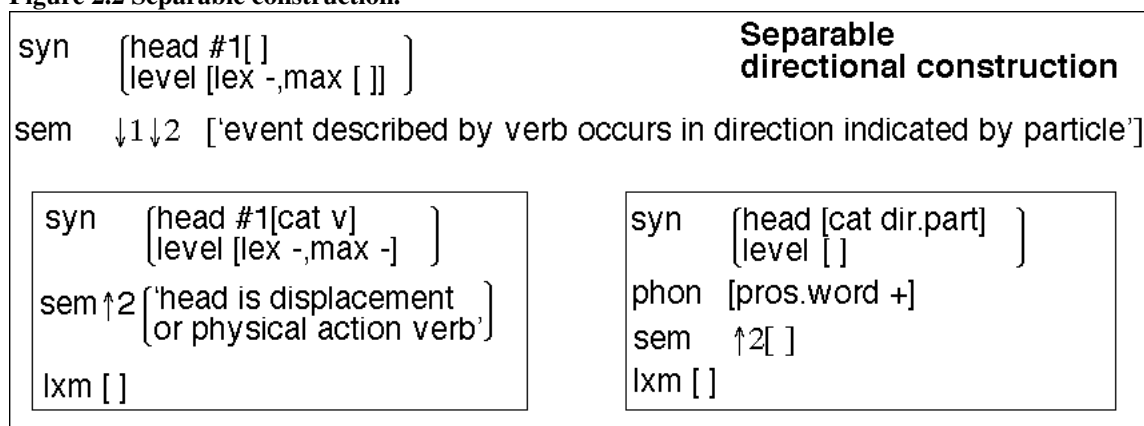
The construction belongs to the syntactic category of directional particle. This is indicated by the attribute-value pair *cat v* within the *head* attribute of *syn(tax)* feature of the construction. In the *level* attribute the attribute-value pair *lex +* specifies that the construction is a lexical construction and so creates a form at the word level of the phrase structure (for an explanation of this, see section 1.2.1). The unspecified *max []* attribute indicates that the construction can be further expanded but does not have to be. It is possible to have combined particle constructions, made by combining a class two directional particle and a class one particle together, which are maximally expanded. They are discussed in section 2.2.3 below. The *sem(antics)* feature indicates that the meaning of the form created by the construction is to ‘indicate a path towards the speaker or other key participant’. Finally, in the *lexeme* feature (*lxm*) the form of the resulting construct is supplied, *lái*.

The construction also has a *phon(ology)* feature, which contains attributes relating to the phonological form of any construct it produces. The attribute-value pair specified in this construction is *pros.word +*, which means that the form created by the construction can serve as a prosodic word in its own right. As is commonly observed, most prosodic words in Modern Mandarin are composed of two monosyllabic morphemes that together form a disyllabic compound. This state of affairs is the result of a process I call the tendency towards disyllabification. Although the tendency towards disyllabification is a very strong force in the grammar of Modern Mandarin, there are many exceptions.

Some forms are longer than two syllables and others are shorter, being only one syllable long. Exceptions to the tendency towards disyllabification arise for many different reasons. The class one directional particles *lái* and *qù* probably gained their exemption in an earlier variety of the Chinese language because of their high degree of grammaticalisation. For a fuller account of the tendency towards disyllabification, its diachronic operation and its effects on the development of the directional constructions, see section 4.2.2.

The directional particle shown in figure 2.1 can directly unify with the separable syntactic construction shown in figure 2.2 below to create a directional construct with the separable syntactic configuration, like that in (2b) above.

Figure 2.2 Separable construction.



The *head* attribute in the syntax feature of the parent construction is unspecified, however it is linked to the the head attribute of the child construction through the agreement index #1. This means that the head attribute in the syntax of the parent construction must be the same as the head attribute in the child construction. The head attribute in the child construction is specified as *cat v* and so the head of the construction must also be *cat v*. The *level* attribute within the syntax feature of the parent construction has the sub-attributes *lex -* and *max []*. These indicate that the parent construction is a phrasal construction that can be further expanded expanded but does not have to be. It is therefore able to unify with other higher-level modifiers and operators, like the sentence-final aspect marker *了* and clause-level adjuncts.

The parent construction has a semantic attribute that specifies that the directional particle indicates the direction in which the event described by the verb takes place. The semantic features of the verb and particle are also integrated with the parent construction. This is shown with the integration arrows (↓↑).

In the syntax features of the first child construction it is specified that the construction should unify with a non-maximally expanded phrasal construction *level [lex -, max -]*, the head of which is a verb *head [cat v]*, that is, a non-maximally expanded verb phrase. The second child construction should be a directional particle. The directional particle that unifies with this slot should be able to

produce an independent prosodic word *phon* [*pros.word* +]. The *level* attribute of the directional particle slot is unspecified here because it is not needed to constrain the constructions that can unify with this slot.

Note that in constructions that have more than one child construction slot, like the inseparable construction shown in figure 2.2 above, the order of the child construction boxes from left to right represents the linear order of the forms of the child constructions in the unified construction. So in the case of the separable construction the verb phrase will appear first followed by the directional particle. This can be seen in actual constructs that this construction was involved in the production of, like that in (2b) above.

The constructions involved in producing the inseparable syntactic configuration are more complicated than those for producing the separable configuration. They have many attributes that are designed to describe their interaction with the class two directional particles. I will postpone discussion of the inseparable constructions to section 2.2.2, where the class two particle constructions are discussed.

2.2.2. Class two directional particles.

Class two directional particles describe a path that is oriented around a deictic centre based on a landmark in the discourse. For example, the particle *xià* 下 ‘down’ describes a path from a higher point to a lower point relative to a landmark, and the particle *chū* 出 ‘out’ describes a path from inside a landmark to outside it. There are eight class two directional particles in Modern Mandarin. They are listed in table 2.2 below. I have mostly used English phrasal verb particles as the glosses of the Mandarin particles. I have done this in an effort to draw out the semantic and structural similarity between many English phrasal verb constructions and Mandarin class two directional particles.

Table 2.2. Class two directional particles.

form	gloss of particle	gloss of corresponding verb
<i>shàng</i> 上	‘up’ — from lower to certain higher	move up
<i>xià</i> 下	‘down’ — from higher to lower	move down
<i>jìn</i> 進	‘in’ — from outside to inside	move in
<i>chū</i> 出	‘out’ — from inside to outside	move out
<i>qǐ</i> 起	‘upwards’ — from lower to uncertain higher	rise up
<i>huí</i> 回	‘back’ — from one location to former location	move back
<i>guò</i> 過	‘over’ — across a location	move across
<i>kāi</i> 開	‘away’ — in separate directions	open

Of the glosses provided in table 2.2 above, the only ones that are perhaps not immediately clear are those used for *shàng* 上 and *qǐ* 起. Both these particles indicate movement in an upward direction. The difference between these particles is that *shàng* has a clear ending point, while *qǐ* does not (cf. Ohta 1987:200). The difference between the two particles is made clear in (3) below, where the two particles are contrasted. In (3a), the actor simply raises the handgun to an unspecified point, while in (3b) the speaker ends up at the specific location ‘up on level four’.

(3) **Comparison of *qǐ* and *shàng*.**

a. 金 劍 慢慢地 舉起 了 手槍。
 Jīn Jiàn man-man-de jǔ-qǐ le shǒu-qīāng
 Jin Jian slow-slow-ADV raise-upwards PERF hand-gun
 ‘Jin Jian slowly raised up the handgun.’
 (Lancaster Corpus)

b. 再 走上 四 層 樓...
 zài zǒu-shàng sì céng lóu...
 again walk-up four CL:level building
 ‘If you then walk up to the fourth floor...’
 (Sina News Centre *Sina* 新聞中心, <http://news.sina.com.cn/o/2004-11-14/15164235484s.shtml>)

Examples of the other class two directional particles are provided in (4) below.

(4) **Other class two directional forms.**

a. 他 坐下， 就坐 在 藏花 的 旁边。
 tā zuò-xià, jiù-zuò zài zànghuā de pángbian
 3.s sit-down, just-sit be.at Zanghua POS beside
 ‘He sat down, sat beside Zanghua.’

b. 這天， 秉 乾 夾着 書本， 走進 了 教室。
 zhè-tiān, Bǐng Qián jiā-zhe shūběn, zǒu-jìn le jiàoshi
 this-day, name name clasp-DUR books, walk-in PERF classroom
 ‘This day, Bing Qian walked into the classroom with his books clasped under his arm.’

c. 爸爸 伸出 握拳 的 左手...
 bàba shēn-chū wò-quán de zuǒ-shǒu...
 dad extend-out clenched-fist NOM left-hand...
 ‘Dad extended his left hand clenched into a fist...’

d. ...退回 原 位置...
 ...tuì-huí yuán wèizhi...
 ...retreat-back original position...
 ‘...she went back to her original position...’

- e. 他 看到 很多 人 從 他 面前 走過。
 tā kàn-dào hěn-duō rén cóng tā miànqián zǒu-guò.
 3.s see-arrive very-many person from 3.s in.front walk-over.
 ‘He saw many people walk past in front of him.’
- f. 那 位 姑娘 冷笑 一 聲， 在 祠 門 躊躇 一 下， 便 待 轉身 走開。
 nà wèi gūniang lěngxiào yì shēng, zài cí mén chóuchú yíxià, biàn dài zhuǎn-shēn zǒu-kāi.
 that CL girl cold-laugh one sound, at temple door hesitate briefly, then stop turn-body walk-away
 ‘That girl laughed coldly, hesitating at the door of the temple; then she stopped, turned around and walked away.’
 (Lancaster Corpus)

The class two particles are always bound to the verb when they appear on their own in the clause (it is possible for them to appear separate from the verb when they are in the combined constructions, which are described in section 2.2.3 below). This is because, unlike the class one particles, they cannot form prosodic words on their own. They are therefore prevented from unifying with the separable construction, since the separable construction requires a directional particle that can form a prosodic word. The class two particles are probably unable to form prosodic words on their own because they were unable to gain an exemption from the tendency towards disyllabification at an earlier stage of the language. As is shown in section above, the class one particles were able to gain an exemption because they were more highly grammaticalised at a crucial point in the history of the language. This issue is dealt with in detail in section 4.2.2.

The class two particles are still not as highly grammaticalised as those in class one. This can be seen in the way that the class two particles retain independent argument structures while the class one particles do not. The independent argument structures of class two particles allow them to add location arguments to the predicate. An example of this is shown in (5a) below, repeated from (3b), where the directional particle *shàng* 上 ‘up’ adds the argument *sì céng lóu* 四層樓 ‘fourth floor’. It would not be possible for the verb *zǒu* 走 to appear with the goal argument alone. **zǒu sì céng lóu* 走四層樓 ‘walk fourth floor’ is ungrammatical. The same is true in (5b). In this example *shàng* adds the location argument *fǎtíng* 法庭 to the predicate. Note that the host verb *bān* 搬 ‘move’ is transitive and has an overtly expressed object. Directional particles can therefore add location arguments to either intransitive or transitive verbs.

(5) **Class two directional particle adding a location argument.**

- a. 再 走上 四 層 樓...
 zài zǒu-shàng sì céng lóu...
 again walk-up four CL:level building

‘If you then walk up to the fourth floor...’

(Sina News Centre *Sina* 新聞中心, <http://news.sina.com.cn/o/2004-11-14/15164235484s.shtml>)

- b. 接 著， 石 美瑜 又 叫 人 將 那 批
jiē zhe, shí měiyú yòu jiào rén jiāng nà pǐ
continue DUR, Shi Meiyu again make person DISP that CL
從 ”萬 人 坑” 裡 挖出來 的 顱骨 搬上 法庭。
cóng wàn rén kēng lǐ wǎ-chu-lai de lúgǔ bān-shàng fǎtíng.
from ten.thousand person pit inside dig-out-hither NOM skull move-up court.
‘Furthermore, Shi Meiyu again got people to move those skulls that had been dug out of the “Ten thousand man pit” up into the court.’
(Lancaster Corpus)

In figure 2.3 below is a box diagram of a class two particle construction. The class two particle construction is virtually identical in terms of the attributes within its features to the class one particle construction shown in figure 2.1 above. The only major difference is that the class two construction has a location argument specified within its valence feature.

Figure 2.3 Diagram of a class two directional particle construction.

syn	[head [cat dir.part]] [level [lex +,max []]]	Directional particle 'shàng'
phon	[pros.word -]	
sem	['indicate path from low point to high point'] [frame SHANG FE #1['location that is reached']]	
val	{ #1[rel [θ goal [DA -]]] }	
lxm	[SHANG]	

The class one and class two directional particle constructions shown in figures 2.1 and 2.3 can unify with the inseparable constructions to produce constructs with the inseparable configuration, like those shown in (2a), (4c) and (5a) above. I cite all of these examples because each one has a different configuration of the arguments of the child constructions. There are actually two variants of the inseparable construction that produce the two argument configurations that can be seen in these constructs. In the constructs in (2a) and (4c), the argument that serves as object of the predicate is introduced by the verb, but in (5a) the object is a location argument introduced by the class two directional particle. These two argument configurations are produced by the inseparable construction [privilege verb] and inseparable construction [privilege dir.part].

Before the directional particles can appear in inseparable constructions they must first be derived to become directional particle clitics. As was shown above, the directional particles that appear within the inseparable configuration are more clitic-like than the particles that appear in the separable configuration, in that they have a reduced pronunciation and must directly follow the verb. However, it was also demonstrated above on semantic grounds that the particles that appear in the two configurations are related. The relationship between the two sets of particles is complex. On a formal

level the clitic-like particles appear more grammaticalised than their independent relatives, since they have a reduced pronunciation and cannot serve as syntactic words in their own right. On a semantic level, however, there does not seem to be any difference. The two sets of particles are probably best considered variants forms produced by similar constructions that have common underlying roots in the synchronic grammar. It is often observed that diachronic developments can lead to a mixed system in a language where there are many closely related and yet slightly different variant constructions that can coexist for a long time or even indefinitely (Hopper and Traugott 2003:124-126).

The best way to capture the relationship between the independent particles and clitics is to say that the clitics in the inseparable construction are derived from the full particles through a feature-changing construction.¹ The feature-changing construction takes a directional particle and derives a more clitic-like variant of it. The ‘derive clitic from directional particle’ construction is shown in figure 2.4 below.

Figure 2.4 Derive clitic from directional particle construction.

		Derive clitic from directional particle
syn	[head [cat dir.part.clitic] level []]	
phon	['form pronounced in neutral tone']	
sem	↓1[]	
val	#2{ }	
lxm	#3[]	
syn	[head [cat dir.part]] level []]	
sem	↑1[]	
(val	#2{ })	
lxm	#3[]	

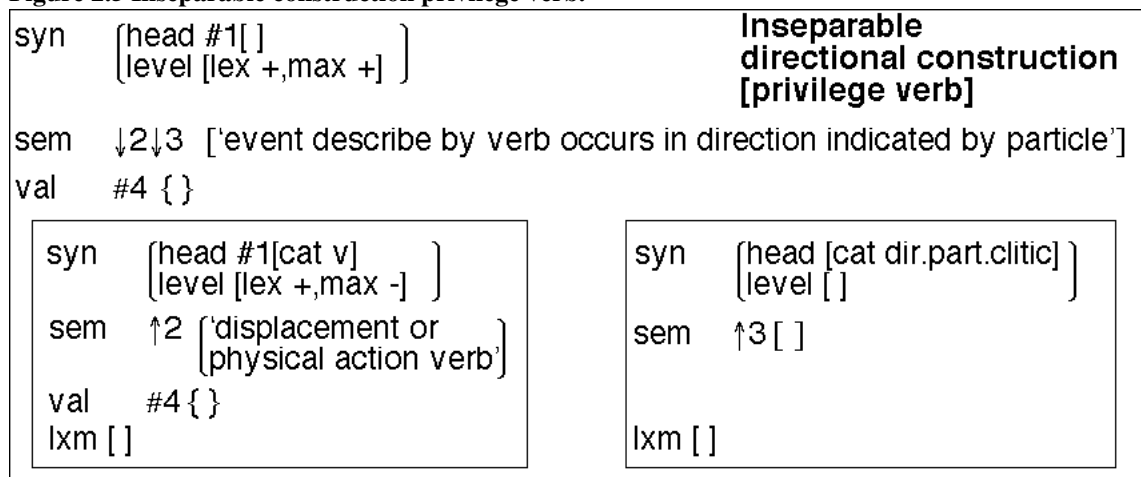
The ‘derive clitic’ construction has one child construction slot, which can unify with a directional particle. The attributes in the semantic, lexeme and valence (if present) features of the child construction are integrated with those of the parent construction. The integration of the semantic attributes is indicated by the arrows (↓↑), and the integration of the valence and lexeme attributes by the indices #2 and #3. The construction that unifies with the child construction slot may or may not have a valence feature. The optional nature of the valence feature is indicated by its being enclosed in parentheses. If the child construction does not have a valence feature then there is nothing to integrate with the parent construction and so the valence feature of the parent construction will remain empty. The syntax and phonology features of the parent construction are not linked to those of the child construction.

¹ A feature-changing construction is a construction that modifies the features of one construction so that it can unify with other constructions that it would otherwise be incompatible with. See Fried and Östman (2004:38) for a discussion of feature-changing constructions.

The syntax feature of the parent construction makes the unified construction a member of the syntactic category *dir.part.clitic* (directional particle clitic). The phonology feature of the parent construction removes any tone from the form of the unified construction.

The new construction produced from the unification of a directional particle construction with the ‘derive clitic’ construction can unify with the inseparable syntactic construction to create a directional form within the inseparable configuration. A box diagram of the inseparable construction is shown in figure 2.5 below.

Figure 2.5 Inseparable construction privilege verb.



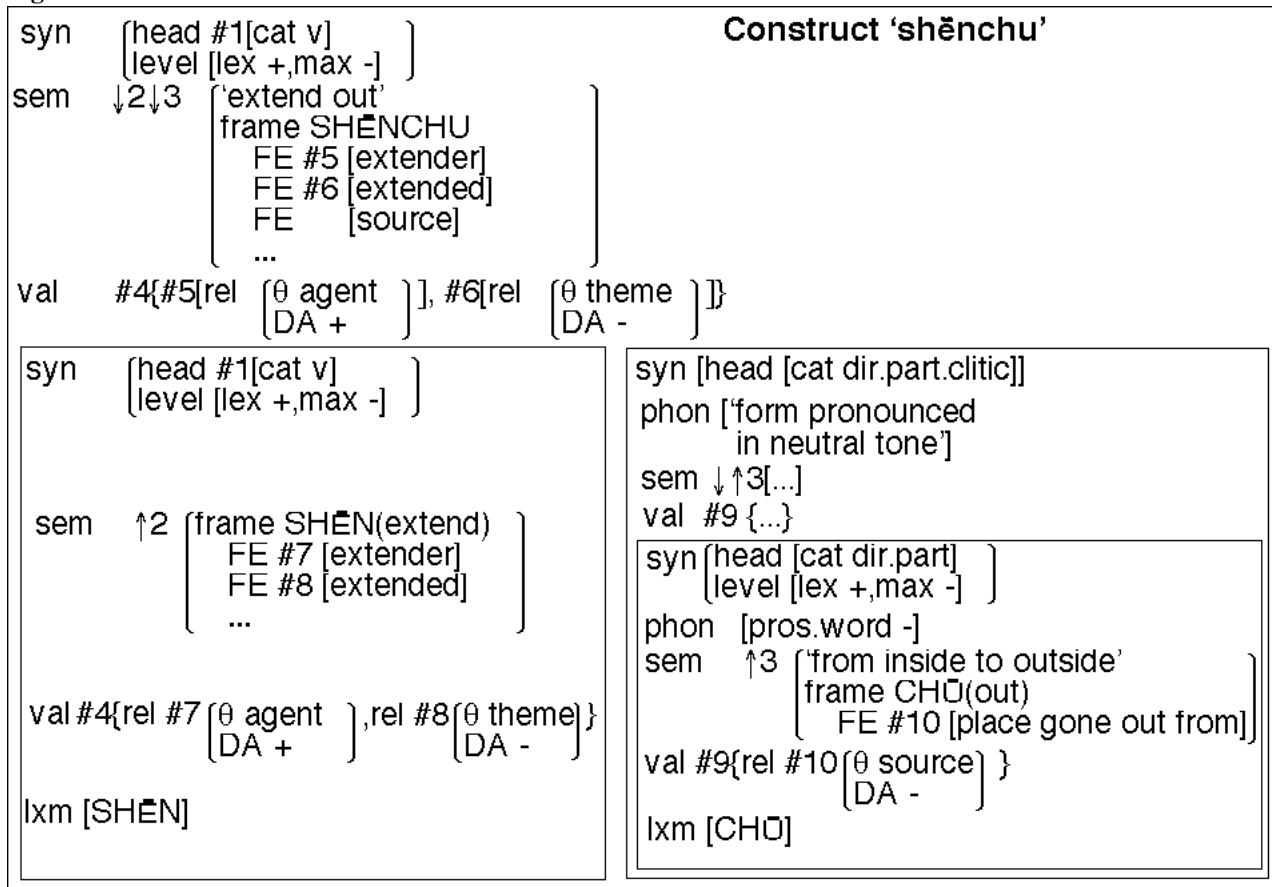
The inseparable construction is very similar to the separable variant. The main differences are that it unifies with a word-level verb rather than a verb phrase, as in indicated in the attributes *head [cat v]* and *level [lex +, max -]* of the syntax feature of the first child construction. The directional particle it unifies with must belong to the category *dir.part.clitic*, meaning that it must be a directional particle clitic derived by the ‘derive clitic’ construction.

The parent construction has the syntactic attributes *head #1[]* and *level [lex +, max +]*. The head attribute specifies that the inseparable construction, like the separable construction, takes its head from the verb construction that it unifies with. The level attribute indicates that the inseparable construction produces a word-level construction that is maximally expanded. The constructs produced by the inseparable construction are therefore compound verbs, unlike those produced by the separable construction, which are verb phrases.

The inseparable construction integrates the valence features of the child verb construction into the parent construction. The argument structure of parent construction will therefore be identical to that of the child verb construction. The child verb construction can have any argument structure. The inseparable construction does not apply any constraints. There is no valence attribute specified for the *dir.part.clitic* child construction. This means that the parent construction will ignore any valence feature that the *dir.part.clitic* child construction might have.

In figure 2.6 below is a box diagram representation of the construct *shēnchu* 伸出, shown in (4c) above. This construct is formed through the unification of the constructions described above.

Figure 2.6 Construct with DA - from verb.

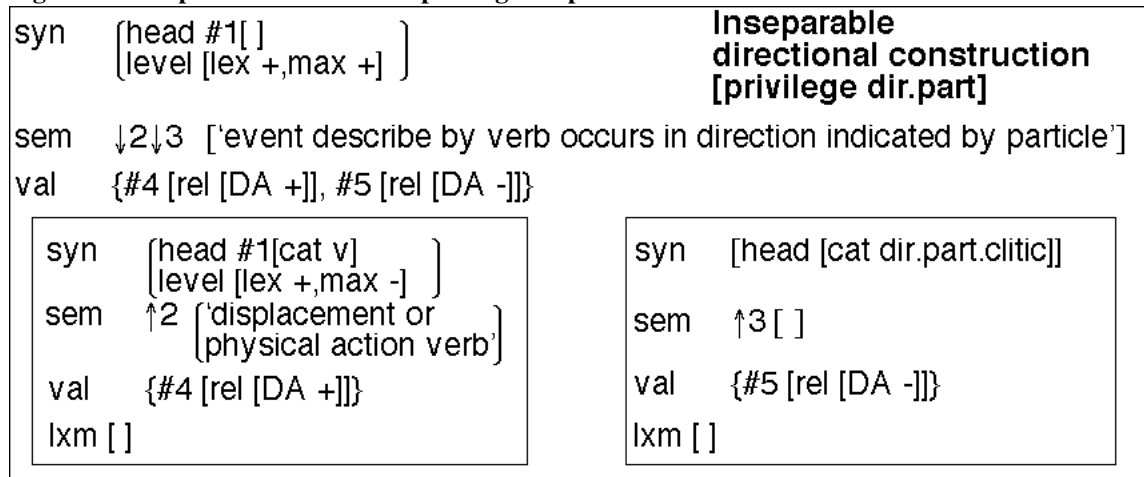


The innermost box on the right side of the diagram is the directional particle construction. It first unifies with the derive clitic construction, which then unifies with the inseparable construction [privilege verb]. A verb also unifies with the inseparable construction, shown in the box on the left. The semantic attributes of the two child constructions are integrated into the parent construction. Only the valence attributes of the verb construction are integrated with the parent, however, so the directional particle cannot add a location argument to the valence of the parent construction. The frame element 'place gone out from' in the child the dir.part.clitic construction is integrated with the semantic feature of the parent construction, but this frame element has no relation attribute in the valence feature of the parent construction and so cannot be realised as an argument.

To make constructs like those shown in (5b), where the directional particle adds a location argument to the unified inseparable construction, the inseparable construction [privilege dir.part] must be used. This construction is virtually identical to the inseparable construction [privilege verb], the only difference being that the valence feature of the parent construction draws arguments from the valence features of both the child verb construction and the child dir.part.clitic construction. The DA + argument of the parent is linked to the DA + argument of the verb construction, and the DA - of the

parent is linked to the DA - of the directional particle. Note that since the construction that unifies with the dir.part.clitic slot must have a DA - argument specified in its valence, only class two directional particles that have DA - arguments can unify with this construction. A box diagram of the inseparable construction [privilege dir.part] is shown in figure 2.7 below.

Figure 2.7 Inseparable construction privilege dir.part.



This construction will produce a construct like that in (5b), which is shown in figure 2.8. In this construct the DA + argument of the parent is linked to the DA + argument in the child verb construction through the index #4, and DA - of the parent is linked to the DA - of the child through the index #5.

Figure 2.8 Construct with DA - from directional particle.

		Construct 'bānshang'																												
syn	[head #1[cat v] level [lex +,max -]																													
sem	↓2↓3 ['move up' frame BĀNSHANG FE #6 [mover] FE [moved] FE #7 [placed moved to] ...]																													
val	{#4#6[rel [θ agent DA +]], #5#7[rel [θ goal DA -]]}																													
<table border="1"> <tr> <td>syn</td> <td>[head #1[cat v] level [lex +,max -]</td> </tr> <tr> <td>sem</td> <td>↑2 [frame BĀN(move) FE #8 [mover] FE #9 [moved] ...]</td> </tr> <tr> <td>val</td> <td>{#4#8[rel [θ agent DA +]], #9[rel [θ theme DA -]]}</td> </tr> <tr> <td>lxm</td> <td>[BĀN]</td> </tr> </table>		syn	[head #1[cat v] level [lex +,max -]	sem	↑2 [frame BĀN(move) FE #8 [mover] FE #9 [moved] ...]	val	{#4#8[rel [θ agent DA +]], #9[rel [θ theme DA -]]}	lxm	[BĀN]	<table border="1"> <tr> <td>syn</td> <td>[head [cat dir.part.clitic]]</td> </tr> <tr> <td>phon</td> <td>['form pronounced in neutral tone']</td> </tr> <tr> <td>sem</td> <td>↓↑3[...]</td> </tr> <tr> <td>val</td> <td>{#5[...]}</td> </tr> <tr> <td colspan="2"> <table border="1"> <tr> <td>syn</td> <td>[head [cat dir.part] level [lex +,max -]</td> </tr> <tr> <td>phon</td> <td>[pros.word -]</td> </tr> <tr> <td>sem</td> <td>↑3 ['from lower to higher' frame SHANG(up) FE #10 [place moved to]</td> </tr> <tr> <td>val</td> <td>{#5#10[rel [θ goal DA -]]}</td> </tr> <tr> <td>lxm</td> <td>[SHANG]</td> </tr> </table> </td> </tr> </table>	syn	[head [cat dir.part.clitic]]	phon	['form pronounced in neutral tone']	sem	↓↑3[...]	val	{#5[...]}	<table border="1"> <tr> <td>syn</td> <td>[head [cat dir.part] level [lex +,max -]</td> </tr> <tr> <td>phon</td> <td>[pros.word -]</td> </tr> <tr> <td>sem</td> <td>↑3 ['from lower to higher' frame SHANG(up) FE #10 [place moved to]</td> </tr> <tr> <td>val</td> <td>{#5#10[rel [θ goal DA -]]}</td> </tr> <tr> <td>lxm</td> <td>[SHANG]</td> </tr> </table>		syn	[head [cat dir.part] level [lex +,max -]	phon	[pros.word -]	sem	↑3 ['from lower to higher' frame SHANG(up) FE #10 [place moved to]	val	{#5#10[rel [θ goal DA -]]}	lxm	[SHANG]
syn	[head #1[cat v] level [lex +,max -]																													
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<table border="1"> <tr> <td>syn</td> <td>[head [cat dir.part] level [lex +,max -]</td> </tr> <tr> <td>phon</td> <td>[pros.word -]</td> </tr> <tr> <td>sem</td> <td>↑3 ['from lower to higher' frame SHANG(up) FE #10 [place moved to]</td> </tr> <tr> <td>val</td> <td>{#5#10[rel [θ goal DA -]]}</td> </tr> <tr> <td>lxm</td> <td>[SHANG]</td> </tr> </table>		syn	[head [cat dir.part] level [lex +,max -]	phon	[pros.word -]	sem	↑3 ['from lower to higher' frame SHANG(up) FE #10 [place moved to]	val	{#5#10[rel [θ goal DA -]]}	lxm	[SHANG]																			
syn	[head [cat dir.part] level [lex +,max -]																													
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val	{#5#10[rel [θ goal DA -]]}																													
lxm	[SHANG]																													

The approach taken here is similar to that taken by Goldberg (1995) in describing English argument structure constructions in that the burden of specifying the relationship among the arguments of the verb and directional particle is handled by the syntactic constructions that combine them, rather than by the lexical constructions themselves. In this way it is possible to capture the generalisation that the argument structure configurations that arise are associated with each of the syntactic configurations. The different argument structures of the verbs and directional particles that appear in these constructions do not have to be specified redundantly for each verb or directional particle that appears in these constructions. Speakers merely select which of the two variant constructions to use depending on what meaning they want to convey.

Note that the class two directional particles *qǐ* 起 and *kāi* 開 cannot introduce location arguments to the predicate (Liu 1998:316, 381). This would be represented in the system devised above by their not having any arguments listed in their valence. *Qǐ* is also subject to some collocational restrictions within the combined and split particle constructions, which are discussed in section 2.2.3 below. For these reasons, we can probably consider *qǐ* and *kāi* as peripheral members of the radial category of class two directional particle constructions.

2.2.3. Combined and split particle constructions.

In addition to the structures described in sections 2.2.1 and 2.2.2, there are also directional forms in Modern Mandarin that are made up of a class two directional particle followed by a class one directional particle. An example of such a form is shown in (6) below. The meaning of these combined directional forms is wholly compositional. They specify direction relative to both a deictic centre oriented around the location of the speaker or other key participant and to a deictic centre anchored in the discourse. In (6) *xià* 下 ‘down’ indicates that the sun moves down and *qù* 去 ‘thither’ indicates that it moves away from the speaker or the perceiver of the scene, since it is not clear whether the speaker features as a participant in the situation described (see discussion of deictic centre of class one particles in section 2.2.1 above). These directional forms involving both a class one and a class two directional particle are made by the combined particle construction.

(6) **Combined directional form.**

太陽	在	西邊	的	山顛	落下去...
tàiyáng	zài	xī-bian	de	shān-diān	luò-xia-qu...
sun	be.at	west-side	POS	mountain-top	fall-down-thither...

‘The sun went down the western peak of the mountain...’
(Lancaster Corpus)

The collocations of particular class two particles and class one particles within the combined constructions are at least partly conventional. We can see that this is the case since one logically possible collocation, *qǐqu* 起去 ‘upwards thither’, is judged to be ungrammatical by speakers of Modern Mandarin, even though this form is attested in earlier varieties of the language and other contemporary dialects and does not describe a path that is semantically anomalous (see Chao 1968:463 and Xing 2005 for examples of *qǐqu* in other varieties of Chinese). There does not seem to be any principle that can be used to explain why this collocation is prohibited in Modern Mandarin other than to say that the particle *qǐ* has idiosyncratic behaviour. It shares many properties in common with the prototypical members of the category of class two directional particle constructions, but it lacks some properties, so it is best considered a peripheral member of the category of class two directional particles.

The construction that creates the combined forms is shown in figure 2.9 below.

Figure 2.9 Combined construction.

		Combined directional construction																
syn	(head [cat dir.part]) (level [lex +,max +])																	
phon	[pros.word +]																	
sem	↓1↓2 ['deictic centre speaker and landmark']																	
<table border="0"> <tr> <td>syn</td> <td>(head [cat dir.part]) (level [lex +,max -])</td> </tr> <tr> <td>phon</td> <td>[pros.word -]</td> </tr> <tr> <td>sem</td> <td>↑1['deictic centre landmark']</td> </tr> <tr> <td>lxm</td> <td>[]</td> </tr> </table>		syn	(head [cat dir.part]) (level [lex +,max -])	phon	[pros.word -]	sem	↑1['deictic centre landmark']	lxm	[]	<table border="0"> <tr> <td>syn</td> <td>(head [cat dir.part.clitic]) (level [lex +,max -])</td> </tr> <tr> <td>phon</td> <td>[pros.word +]</td> </tr> <tr> <td>sem</td> <td>↑2['deictic centre speaker']</td> </tr> <tr> <td>lxm</td> <td>[]</td> </tr> </table>	syn	(head [cat dir.part.clitic]) (level [lex +,max -])	phon	[pros.word +]	sem	↑2['deictic centre speaker']	lxm	[]
syn	(head [cat dir.part]) (level [lex +,max -])																	
phon	[pros.word -]																	
sem	↑1['deictic centre landmark']																	
lxm	[]																	
syn	(head [cat dir.part.clitic]) (level [lex +,max -])																	
phon	[pros.word +]																	
sem	↑2['deictic centre speaker']																	
lxm	[]																	

The construction unifies with a class two directional particle and a class one directional particle. This is explicitly indicated in their syntactic, phonological and semantic features. Both constructions must belong to *cat dir.part*. The first must not be able to form a prosodic word (*pros.word -*) and the second must be able to form a prosodic word (*pros.word +*). The first must describe a path oriented around a landmark as deictic centre and the second must describe a path centred around the speaker as deictic centre. These attributes serve to specify that the construction that unifies with the first child construction slot must be a class two directional particle and the construction that unifies with the second child construction slot must be a class one directional particle. The particles must also be able to take on the value - for the attribute *max*, meaning that they are able to be further expanded. Most class one and class two directional particles are able to do this, since *max* is left unspecified in their diagrams. The particle *qĩ*, which cannot appear in the combined construction, could be represented as having the *max* attribute specified with the value +. The parent construction also has the attribute *max* with the value +. These differences between the syntactic and semantic attributes of the parent construction and child construction slots ensure that the child slots of the combined directional construction can only unify with class one and class two particles and cannot recursively unify with the combined particle construction.

The parent construction integrates the semantic features of the child constructions. It also has a phonology feature with the attribute *pros.word +* specified. This indicates that the forms created by this construction can serve as prosodic words in their own right. They can do this because they are two syllables long and so satisfy the disyllabic constraint.

The combined construction can appear in two different structural configurations. In the first configuration the particles are bound to the end of the verb with all other constituents having to appear after the verb and particles, as in (7a), and in the second configuration the particles are separated from the verb and form a separate constituent together, as in (7b). These configurations are simply the result of the combined directional construction unifying with the separable and inseparable constructions. This possibility is allowed for in the formal descriptions of the constructions supplied so far. The

features of the combined particle construction are compatible with the particle slots in the separable and inseparable constructions.

(7) **Inseparable and separable combined directional constructs.**

- a. 他 端上來 了 一 碗 湯。
 tā duān-shang-lai le yì wǎn tāng.
 3.s serve-up-hither PERF one bowl soup.
 ‘He served up a bowl of soup.’
- b. 他 端 了 一 碗 湯 上來 了。
 tā duān le yì wǎn tāng shàng-lai le.
 3.s serve PERF one bowl soup up-hither CRS.
 ‘He served up a bowl of soup.’
 (Li and Thompson 1981:63)

There is a third configuration that allows both class one and class two directional particles to appear in the same clause. In this configuration the particles are split and the object appears between the two particles. Some examples are shown in (8) below.

(8) **Split directional construct with theme object.**

- a. 他 端上 一 碗 湯 來 了。
 tā duān-shang yì wǎn tāng lái le.
 3.s serve-up one bowl soup hither CRS.
 ‘He served up a bowl of soup.’
 (Li and Thompson 1981:63)

Split directional construct with location object introduced by class two particle.

- b. 他 跑進 屋子 去 了。
 tā pǎo-jin wūzi qù le.
 3.s run-in room thither CRS.
 ‘He ran into the room.’
 (Li and Thompson 1981:64-65)

In the split configuration the class two particle is bound to the verb and then followed by an object, which is then followed by the class one particle. It may seem that the split forms are produced by a class two construction first unifying with the inseparable construction and then the resulting verb phrase unifying with a class one particle through the inseparable construction. This is most probably the diachronic source of this configuration, as is discussed in section 5.2. However, if the inseparable and separable constructions described above were to unify in this way they could produce constructs that are actually ungrammatical in Modern Mandarin. For example, aspect markers like *le* 了 and *zhe*

著 should be able to appear between the class two directional particle and the object, since they belong within the verb phrase. As can be seen in (9) below, however, a construct with this structure would be ungrammatical.

(9) **Ungrammatical split constructs with *le*.**

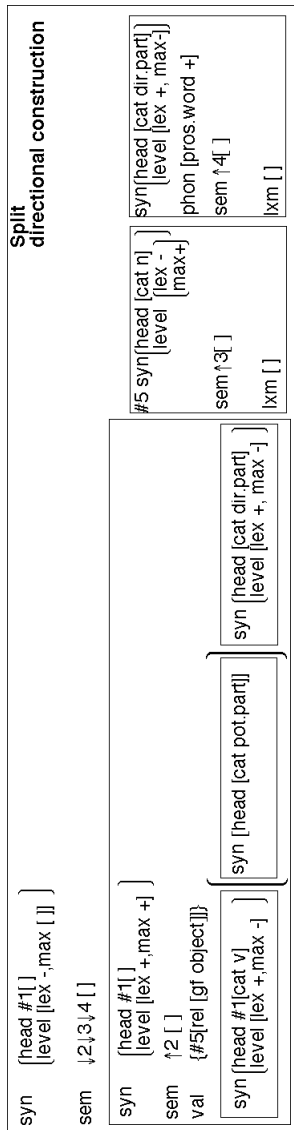
a. *他 端上 了 一 碗 湯 來 了。
 tā duān-shang le yì wǎn tāng lái le.
 3.s serve-up PERF one bowl soup hither CRS.
 ‘He served up a bowl of soup.’

b. *他 跑進 了 屋子 去 了。
 tā pǎo-jìn le wūzi qù le.
 3.s run-in PERF room thither CRS.
 ‘He ran into the room.’

The ungrammaticality of the construct in (9b) can be explained on semantic grounds. The perfective aspect marker *le* 了 cannot appear in this clause because the event is already bounded by the location object, which describes an end-point (it is well-accepted that *le* cannot appear in clauses that have other elements that indicate they are perfective; Li and Thompson 1981:205-207). The same semantic constraint does not apply in the construct in (9a), however. The object in this clause does not describe an end-point. We know that the clause is not inherently perfective, since an utterance with virtually the same meaning can be made with the combined particle construction and the perfective aspect marker can be used in these cases, as is shown in (7) above.

Since the configurations shown in (8) above cannot be described using other constructions in the language, they must be created by a special split directional construction. The split directional construction is a complex phrase construction. A box diagram of the construction is shown in figure 2.10 below.

Figure 2.10 Split construction.



The split construction is essentially a special type of verb phrase construction. It creates a verb phrase from an inseparable construction or potential construction plus a noun phrase construction and a class one directional particle construction.² The leftmost child construction slot unifies with the inseparable construction or the potential construction. This is indicated by the three boxes inside the child construction box, which indicate that the construction must contain a verb, a directional particle and also optionally a potential particle. The optionality of the potential particle is indicated by its being enclosed in parentheses. If the child construction has a potential particle, it is produced by the potential construction, if it has no potential particle then it is the product of the inseparable construction.

² The potential constructions are a special infixing construction that can unify with the inseparable construction to produce a compound verb made up of a head verb, potential particle and directional particle. The potential particle carries modal meanings. The potential construction is discussed in section 2.2.4 below.

The central child construction slot unifies with a noun phrase construction. The noun phrase child construction is explicitly marked as the object of the verb child construction. This is done through the agreement index #5, which links the noun phrase child construction to the *gf object* (grammatical function object) attribute of the verb construction's valence feature.³ The attribute *gf* (grammatical function) is used, rather than the attribute *DA* (distinguished argument), because this argument linking occurs at the phrasal level and not at the word level. Argument linking at the phrasal level is achieved through grammatical functions, and grammatical functions are a reflection of the distinguished arguments of a construction that acts as predicate (see the discussion in section 1.2.1).

The child construction slot on the right unifies with a class one directional particle. This is indicated by the syntactic and phonological attributes in the child construction slot. The child construction must not be maximally expanded *max -* and so it cannot be a combined construction. It must also be able to create a phonological word in its own right *pros.word +*. The only directional particle constructions that satisfy these attributes are class one directional particles. The semantic attributes of all the child constructions are integrated into the semantic feature of the parent construction. The parent construction has the syntactic attributes *lex -, max []*. This means that it is a phrasal construction that can be further expanded. It is ready to unify with any verb phrase-level modifiers, although it doesn't have to.

The combined particle construction cannot introduce location arguments to the predicate. Only the split directional construction can do this (Chao 1968:477). This means that constructs that seek to convey the meaning of (8b) above that are not made with the split directional construction but instead made with the combined particle construction would be ungrammatical. This can be seen in (10) below.

(10) **Ungrammatical constructs produced by the combined particle construction that introduce location arguments.**

a. *他 跑 屋子 進去 了。
 tā pǎo wūzi jìn-qu le.
 3.s run room in-thither CRS.
 'He ran into the room.'

b. *他 跑進去 屋子 了。
 tā pǎo-jìn-qu wūzi le.
 3.s run-in-thither room CRS.
 'He ran into the room.'

(Li and Thompson 1981:64-65)

³ How the assignment of a particular argument of the verb construction to object would be achieved is discussed in section 1.2.1.

In my description I have accounted for the fact that the combined particles cannot introduce locational arguments to the predicate by their not having any valence features in the parent construction, as can be seen in the diagram in figure 2.9 above. The split construction, however, does integrate the valence features of the class two directional particle with those of the verb, since it contains an inseparable construction, as can be seen in figure 2.10.

2.2.4. Potential construction.

The directional particles also interact with a directional potential construction. The directional potential construction provides useful clues about the place of the directional constructions in the grammar of Modern Mandarin, since the only constructions that interact with potential constructions of this type are the directional constructions and the resultative and phase constructions (this is discussed in section 2.4 below). The development of the directional potential construction also provides important evidence concerning the development of the directional constructions proper, as is discussed in section 5.3. The potential construction allows the expression of the possibility or impossibility of the event expressed by the verb and directional particle complex being realised. The construction produces a compound word made up of a verb, potential particle and directional particle. There are two potential particles, the positive particle, *de* 得, which indicates that it is possible to complete the event described by the verb, and the negative particle, *bu* 不, which indicates that it is not possible to complete the event described by the verb. The forms and meanings of the potential particles within the potential construction are shown in (11) below.

(11) Potential constructs.

- a. 他 跳得過去。
 tā tiào-de-guò-qu
 3.s jump-can-over-thither
 ‘He can jump across.’
- b. 他 跳不過去。
 tā tiào-bu-guò-qu
 3.s jump-cannot-over-thither
 ‘He cannot jump across.’
 (Li and Thompson 1981:56)

The potential particles can also appear with an object or within the split configuration, as is shown in (12a) and (12b). The potential particle cannot appear in the separable configuration, however.

(12) **Potential construct with object.**

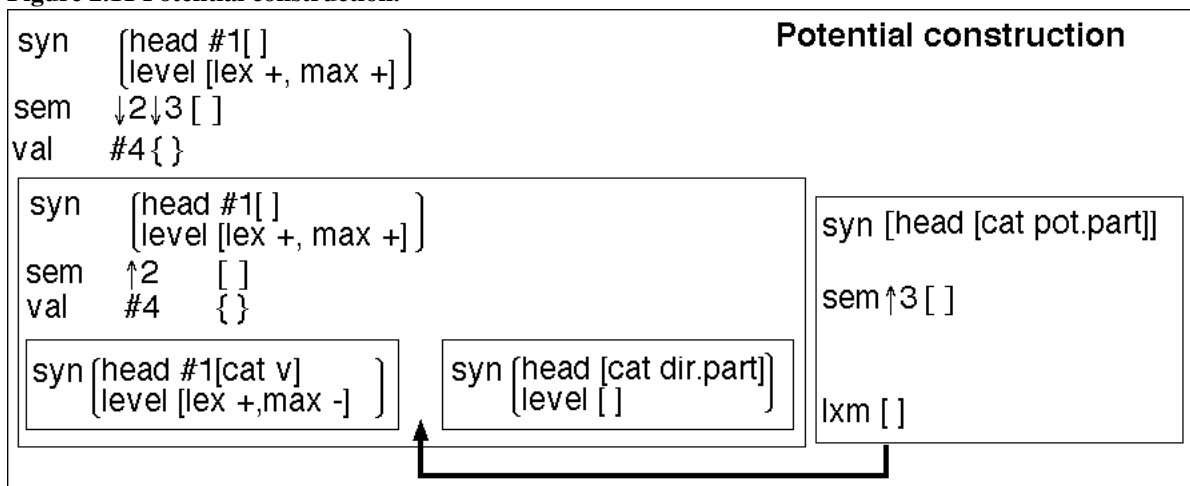
- a. ...雙手 只 拿得起 五十 根 竹簽...
 ...shuāngshǒu zhǐ nádeqǐ wǔshí gēn zhúqiān...
 ...two-hand only take-can-upwards fifty CL bamboo-strip...
 ‘...his two hands could only hold up fifty bamboo strips...’

Split potential configuration.

- b. ...囁囁 著 半天 說不出 話 來...
 ...nièrú zhe bàn-tiān shuō-bu-chū huà lái...
 ...stutter DUR half-day speak-cannot-out word hither...
 ‘...stuttering for ages, he could not say a word.’
 (Lancaster Corpus)

Constructs that involve the positive and negative potential particles are made by the potential construction. The potential construction is shown in figure 2.11 below.

Figure 2.11 Potential construction.



The potential construction unifies with the inseparable construction and a potential particle. The left child construction slot unifies with the inseparable construction. It is made explicit that the only construction that can unify with this slot is the inseparable construction through a multi-layer representation. The construction that unifies in this slot must contain a verb and a directional particle clitic as child constructions.

The potential construction is an infixing construction (Li and Thompson 1981:56; Shi 2001:88). It inserts the potential particle as an infix between the verb and directional particle clitic in the inseparable construction. Fried and Östman (2004) do not provide a representation for infixes, so I have devised the above representation where the arrow indicates that the lexical form of the potential particle in the box on the rightmost side should in fact appear between the two morphemes inside the compound verb.

Note that the potential construction unifies with a full directional particle and not a derived particle clitic. The directional forms in constructs produced by the directional construction have their full tonal values as if they were in the separable construction. This can be seen in (11) and (12) above.

The parent features of the potential construction have the right attributes to unify with the verb child construction slot in the split construction. This allows potential constructs within the split configuration, like that in (12b) above, to be produced.

2.3. Metaphorical senses attached to directional forms.

As mentioned in section 1.1, the basic function attached to all the directional forms is to indicate a path associated with the event expressed by the verb. In addition to this many directional forms also bear extended metaphorical meanings that are derived from their basic spatial senses. We can assume that the spatial senses of the directional forms represent the most basic meanings of the constructions since they are the most concrete and are also the first senses to be attested in the historical record. Metaphors that involve extending a basic spatial sense into another domain are normally called ‘orientation metaphors’ (Lakoff and Johnson 1980:14). Although there is not enough space here to fully examine the orientation metaphors in Modern Mandarin that involve directional forms, I will discuss a few common examples to indicate the range that exists.

Two very productive complementary metaphors in Modern Mandarin are ‘future is down’ and ‘past is up’. These metaphors are often used to describe moments of time relative to the present. Times in the future are often referred to with *xià* 下, literally ‘under’, as in *xià ge xīngqī* 下个星期 ‘next week’ and *xià ge yuè* 下个月 ‘next month’. Times in the past are often referred to with *shàng* 上, literally ‘above’, as in *shàng ge xuéqī* 上个学期 ‘last semester’ and *shàng ge zhōumò* 上个周末 ‘last weekend’. This first metaphor is also used with the directional form *xiàqu* 下去 ‘downwards thither’. When this form unifies with durative verbs it indicates continuative aspect (Chao 1968:462; Li and Thompson 62-63; Ohta 1987:206). The event described by the verb is metaphorically conceived of as going down away from the speaker into the future. An example of this form with its aspectual interpretation is shown in (13) below.

(13) *Xiàqu* as marker of continuative aspect.

...為	這些	人	繼續	生存下去	提供	精神	支柱。
...wèi	zhè-xiē	rén	jìxù	shēngcún-xiaqu	tígōng	jīngshén	zhīzhù.
...for	these-CL	person	continue	live-CONT	provide	spiritual	support.

‘...People continue to live on for these things, they provide spiritual support.’
(Lancaster Corpus)

Another metaphor that seems to be present in the grammar of Modern Mandarin is ‘to start is to move up’. One directional form that seems to be involved in this metaphor is *qǐlai* 起來 ‘upwards hither’ (Huang and Chang 1996). When this form combines with verbs it indicates either inchoative or inceptive aspect, depending on whether the verb is stative or not. An example of the form with the extended meaning is provided in (14) below.

(14) *Qǐlai* as marker of inchoative/inceptive aspect.

...也	只有	改革	開放，	我們	才能	富起來。
...yě	zhǐ-yǒu	gǎigé	kāifàng,	wǒ-men	cái-néng	fù-qǐlai
...also	only-have	reform	openness,	1-pl	then-can	rich-INCH

‘...and only with reform and openness can we become rich.’
(Lancaster Corpus)

Two other very common and closely related metaphors are ‘to be outside is to be produced’ and ‘to be outside is to be known.’ These metaphorical senses are attached to the form *chū(lai)* 出(來) ‘out hither’. Under this metaphor, being produced or becoming known is conceptualised as coming outside (Chao 1968:462; Li and Thompson 1981:66-67). This can be seen in (15) below. In (15a), the actor creates the writing on the page as a result of the act of writing. In (15b) the actor discovers the true nature of the thing under examination from looking.

(15) Metaphorical uses of *chū(lai)*

- a. ...還是 沒 時間 把 它 寫出來。
 ...hái-shì méi shíjiān bǎ tā xiě-chu-lai.
 ...also-is not.have time DISP 3.s write-out-hither.
 ‘...and also that he doesn’t have time to write them out.’
- b. ...看得出 是 從 外地 來到 西安。
 ...kàn-de-chū shì cóng wài-dì lái-dào Xiān.
 look-can-out be from outside-place come-arrive Xi’an.
 ‘...You could tell she came from outside Xian.’
 (Lancaster Corpus)

In (13) the meaning of continuative aspect is attached to the form *xiàqu* 下去 as a whole. The same is true for the meaning of inchoative aspect attached to the form *qǐlai* 起來 in (14). There is no way to derive these meanings from these forms’ component morphemes, that is, the meanings of these forms are non-compositional. These unanalysable forms with metaphorical meanings must therefore be produced by single constructions that associate their particular forms with their particular meanings. These forms are not created from the productive unification of class one and class two particle constructions. An example of the non-composite metaphorical particle construction *xiàqu* 下去 ‘CONT’ is provided in figure 2.12 below.

Figure 2.12 Construction for creating forms with xiaqu.

syn	[head [cat dir.part] [level [lex +, max +]]	Directional particle 'xiàqu'
phon	[pros.word +]	
sem	['continuative aspect']	
lxm	[XIAQU]	

There would also have to be separate syntactic constructions for creating the structures that the directional particles with metaphorical senses appear in. The syntactic constructions posited in sections 2.2.1 and 2.2.2 require that the verbs that appear in the verb child construction slot belong to the class of displacement verbs or physical action verbs. The directional particles with metaphorical senses can be combined with many other types of verbs, however. None of the verbs in (13), (14) and (15) above is a displacement verb or physical action verb. There would therefore have to be variants of each of the syntactic constructions described above that can unify with other types of verbs apart from displacement and physical action verbs. The variant syntactic constructions would also not have the semantic attribute 'event described by verb occurs in direction indicated by particle', since this attribute limits the syntactic constructions above to unifying only with directional particles with basic spatial senses.

2.4. Constructions related to directional constructions.

Directional constructions can be placed in a larger radial category with what I will call the resultative constructions and the phase constructions (cf. the description of these constructions provided by Chao 1968:441-467; Li and Thompson 1981:55-56; Ohta [1958]1987:200). These three types of constructions all have many features in common in Modern Mandarin, as is shown in the discussion below, and share a common diachronic origin, as will be seen in the following chapters.

The resultative construction combines a verb that describes a resulting state with another verb to make a compound verb. A typical resultative compound is shown in (16) below.

(16) **Resultative construct.**

誰 要 砍死 一 棵 樹， 就 是 砍 我 一 條 腿。
shéi yào kǎn-sǐ yì kē shù, jiù shì kǎn wǒ yì tiáo tuǐ.
who will cut-die one CL tree, just be cut 1.s one CL leg.
'Someone cutting down a tree [to death] is like cutting [off] one of my legs.'
(Lancaster Corpus)

In (16) above, the main verb *kǎn* 砍 'cut' expresses the action performed by the actor. The resultative form *sǐ* 死 'die' expresses the state resulting from the action; i.e., the tree dies. It is interesting to note that there is often a very close semantic connection between directional and resultative forms.

Since a directional form indicates a path that is followed during a motion event, it usually either explicitly indicates or at least implies a possible end point. (17) is a good example of this. In this example the directional particle *chū* 出 indicates the path ‘inside to outside’, and so the telegram ends up outside as a result of the action of taking it up, expressed by the verb *ná* 拿.

(17) **Result interpretation of directional form.**

俞	济時	不慌不忙，	拿出	一	份	通电	稿	來...
Yù	Jìshí	bùhuāngbùmáng,	ná- <u>chū</u>	yì	fēn	tōngdiàn	gǎo	lái...
Yu	Jishi	unworried,	take- <u>out</u>	one	CL	telegram	draft	hither...

‘Yu Jishi was unruffled. He took out a telegram...’
(Lancaster Corpus)

The phase constructions produce compound verbs that are marked for aspect. While the resultative forms describe a resulting state, the phasal forms indicate the current state of the event. For example, in (18) below, the phasal form *wán* 完 ‘finished’ indicates that the event described by the verb is completed. The phasal form in (18b), *dào* 到 ‘reach’, is similar. It indicates that the action described by the verb was completed successfully.

(18) **Phase constructs.**

a.	5	公里	越野，	他	第一	個	跑完	全程。
	wǔ	gōnglǐ	yüe-yě,	tā	dì-yí	ge	pǎo- <u>wán</u>	quán-chéng
	5	kilometre	cross-country,	1.s	ORD-one	CL	run- <u>finish</u>	complete-course

‘In the five kilometre cross-country race, he was the first one to finish the complete course.’

b.	...他	親眼	看到	這裡	三	個	學院	的
	...tā	qīnyǎn	kàn- <u>dào</u>	zhèli	sān	ge	xuéyuàn	de
	...3.s	personally	look- <u>reach</u>	here	three	CL	school	POS
	教學	設備	和	圖書	資料	被	一車車	拉走...
	jiàoxué	shèbèi	hé	túshū	zīliao	bèi	yìchēchē	lā-zǒu...
	teaching	facility	and	book	material	PASS	one.by.one	pull-away...

‘...he personally saw the teaching equipment and books of three schools here taken away carload by carload...’
(Lancaster Corpus)

There are also variants of the directional potential construction (described in section 2.2.4 above) that create resultative and phase potential constructs, which are just like those produced by the directional potential construction in form and meaning. The shared properties of the resultative, phase and directional constructions are probably derived from their similar diachronic origins. Their shared source has kept the form and function of the constructions sufficiently similar through each stage of their development for speakers to be able observe their common nature synchronically.

Together the resultative constructions, phase constructions and directional constructions form a radial category. Each group of constructions has its prototypical members, which are the clearest examples of their group. Beyond these prototypical examples there are many other constructions that are similar but clearly different from the prototype, and then others that are more different again. There are some constructions that are so divergent from all the prototypes that they do not fit neatly into any group. One such form is *dào* 到 in (19) below. It is not clear whether this form is a phase form or a directional form. It indicates that the action described by the verb was completed successfully, a phasal characteristic, but it also introduces a locational goal argument, a property of directional forms. The particle used, *dào* 到 ‘reach’, cannot be a directional particle construction, however, since it cannot appear in the combined directional construction. Forms like *dàolai* *V-到來 or *dàoqu* *V-到去 are ungrammatical. This form therefore exists in a grey area between the prototypical instances of these types of constructions.

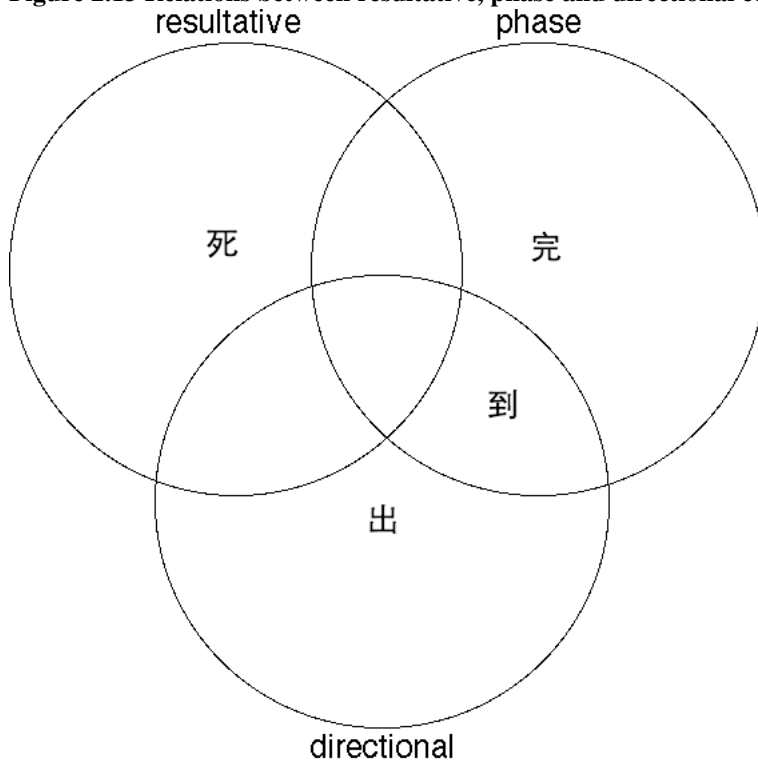
(19) **Ambiguous construct.**

第二 次 偷渡， 是 時隔 一 年 後， 他 又 跑到 廈門。
 dì-èr cì tōudù, shì shígé yì nián hòu, tā yòu pǎo-dào Xiàmén.
 ORD-two time sneak, be time one year after, 1sg again run-arrive Xiamen
 ‘The second time he sneaked over, it was close to a year later, he again ran to Xiamen.’
 (Lancaster Corpus)

Note that *dào* in (19) is not identical to *dào* in (18b). The *dào* in (18b) cannot introduce a location argument to the clause. These two forms are probably the products of two very similar constructions that have a common form but differ minimally in their semantic attributes.

The relations between the three types of constructions could be represented as in the Venn diagram in figure 2.13 below, where I have shown the relationship between the lexical constructions discussed above. The three circles represent the three sub-groups. In the centre of each sub-group is a prototypical construction of that sub-group. The construction *dào* 到 ‘reach’ appears in the overlapping area between the phase constructions and directional constructions, since it is not clear which of these two groups it belongs to.

Figure 2.13 Relations between resultative, phase and directional constructions.



2.5. Conclusion.

The basic function of the directional forms is to indicate a path associated with the event described by the verb. Each of these forms is created by the unification of at least two constructions — a particle construction, which supplies the lexical content of the form, and a syntactic construction, which supplies the structure of the form. There are two major types of particle constructions, the class one particles, which describe a path relative to a deictic centre based on the location of the speaker or some other key participant, and the class two particles, which describe a path relative to a deictic centre based on a landmark within the discourse. The class two particles can also add location arguments to the predicate. There are several different syntactic constructions, which create different structural configurations of verb and particle and can also create combined and split forms that contain two particles.

Some of the directional forms also have metaphorically extended meanings. These forms can be used to indicate such meanings as continuative aspect, inceptive and inchoative aspect, or reinforcing that something is created in the event described by the verb. Unlike the directional forms that bear basic spatial meanings, the combined directional forms with metaphorical meanings are not always compositional and so are probably best represented by separate constructions that are related to those with the basic spatial senses but are still distinct.

The directional constructions can be characterised as belonging to a radial category, with some prototypical members and less prototypical members. The relation of the directional constructions to other similar constructions in the language, like the phase constructions and the resultative constructions, can also be characterised in this way. Each of these categories has prototypical members and non-prototypical members. Some non-prototypical members are equally divergent from prototypes in different groups and so it is not clear which group they belong to.

3. The source of the directional constructions.

3.1. Introduction.

This chapter looks at the source of the Modern Mandarin directional constructions, constructs in Old Chinese (500 BC-AD 200) that were formed through the unification of directional verbs and various syntactic constructions. The Old Chinese directional constructs are the initial forms that underwent successive stages of reanalysis to eventually create the modern directional constructions described in chapter 2. This chapter analyses the constructions that produced the Old Chinese constructs.

The directional constructs that are attested in Old Chinese sources are discussed in section 3.2. These constructs were produced by the unification of syntactic and lexical constructions. The syntactic constructions are discussed in section 3.3, and the lexical constructions are discussed in sections 3.4 and 3.5.

3.2. Old Chinese directional constructs.

In Old Chinese there were no directional constructions like those found in Modern Mandarin. In texts of this time, however, there are many constructs that look superficially similar in form to constructs produced by the modern directional constructions. These constructs are made up of a displacement or physical action verb followed by a verb that indicates movement in a specific direction. These constructs exhibit three structural configurations. The first configuration consists of a displacement or physical action verb immediately followed by a directional verb, which is in turn followed by an object noun phrase that refers to a location (VDL), as in (1a) below. The second configuration also consists of a displacement or action verb followed by a directional verb and an object noun phrase, but in this configuration the object refers to a theme (VDT). This is shown in (1b). The third configuration consists of a displacement or action verb followed by a theme object noun phrase, which is then followed by a directional verb (VTD), as in (1c).¹

¹ The Modern Mandarin pronunciation of the characters in most of the examples is provided in pinyin. Note that this does not reflect how these characters would have been pronounced in earlier varieties of Chinese. It is simply provided for the convenience of readers who are unfamiliar with Chinese characters.

(1) **Verb-directional-location.**

- a. 張 耳 與 趙 王 歇 走 入 鉅鹿 城...
zhāng ěr yǔ zhào wáng xiē zǒu rù jùlù chéng...
Zhang Er with Zhao king stop flee move.in Julu city...
'Zhang Er and the king of Zhao stopped and ran into Julu city...'
(*Shǐjì* 史記, 89.14, ca. 91 BC)

Verb-directional-theme.

- b. 盡 除 去 先 帝 之 故 臣...
jìn chú qù xiān dì zhī gù chén...
completely remove get.rid.of former emperor POS original vassal...
'[He] completely replaced the former emperor's original vassals...'
(*Shǐjì* 史記, 87.24, ca. 91 BC)

Verb-theme-directional.

- c. ...誤 持 同 舍 郎 金 去...
...wù chí tóng shè láng jīn qù...
...mistakenly carry same dormitory official gold leave...
'...he mistakenly took his roommate's gold...'
(*Shǐjì* 史記, 103.14, ca. 91 BC)

In the construct in (1a) it is the agent who is moving in a particular direction. This construct describes self-agentive motion. In (1c) it is the agent and the theme that move together in a particular direction. This construct also describes self-agentive motion, but it also implies that the theme is caused to move along with the agent. The construct in (1b) is different from the first two, however. In this construct the theme is caused to move in a particular direction and the agent does not move. This construct describes caused motion. The Old Chinese constructs can therefore be split into two categories based on whether the directional motion is caused or non-caused.

As with the Modern Mandarin directional forms, the constructs shown in (1) above are the products of the unification of lexical and syntactic constructions. Lexical verb constructions supply the lexical content and syntactic constructions supply the structural configuration of the constructs. The fact that some of the constructs involving directional forms shown above look similar to those produced by the Modern Mandarin directional constructions has led some linguists to claim that constructions like the modern directional constructions had already developed in Old Chinese (see Li 1987:140 for references to linguists who make this claim). However, these directional forms could not have been produced by constructions like the Modern Mandarin directional constructions. As is shown in the following sections, the Old Chinese constructs do not show the same alternations of word order possible in Modern Mandarin and are also not attested as having many of the metaphorically extended senses associated with the modern forms.

Note that in the constructs shown in (1b) and (1c) above the arguments in the subject grammatical function are not overtly realised. It is quite common in all historical varieties of Chinese, including Modern Mandarin, for core arguments of verbs that can be understood from context not to be overtly expressed in the clause. Arguments in the object grammatical function can also be not overtly expressed, as can be seen in the examples in (2) below. In (2b) both the subject and the object arguments are not expressed.

(2) **Constructs with zero anaphoric objects.**

- a. 紂 走 入...
 zhòu zǒu rù...
 Zhou run move.in...
 ‘Zhou ran in...’
 (*Shǐjì* 史記, 3.33, ca. 91 BC)
- b. 復 持 去...
 fù chí qù...
 again carry leave...
 ‘[He] again took it and left...’
 (*Shǐjì* 史記, 56.10, ca. 91 BC)

If a subject or object argument is realised as zero, it does not mean that the argument has been removed from the valence of the verb it belongs to. The argument is still understood from context. The fact that arguments may not be overtly realised is an important consideration in understanding how certain constructs were reanalysed to create the modern directional constructions, as will become clear in the discussion below. For discussion of some of the factors that influence zero realisation of arguments in Old Chinese, see Pulleyblank (1995:13-14), and for Modern Mandarin, see Li and Thompson (1982:657-662). For a discussion of some of the factors that are relevant to descriptions of zero realisation of arguments in Construction Grammar from the point of view of English, see Fillmore (1986).

It may be wondered why the particular constructs shown in (1) and (2) above, with the order displacement or physical action verb followed by directional verb (VD), were those that became grammaticalised to produce the modern directional constructions. A possible explanation can be found in the principle of iconicity. The principle of iconicity has been shown to be a very powerful factor in determining the structures produced in Chinese grammar (see Tai 1985 for discussion of this point). In the VD structure, the directional form typically expresses a locational goal, which may or may not be overtly realised. The goal acts as an end point that serves to provide a final boundary for the motion event described by the directional form (remember that in Old Chinese the directional forms were full verbs and so expressed independent motion events). If the directional form appeared before the verb then the directional motion event would be understood as having been completed before the event

described by the verb had even started. When the directional form appears after the verb, however, the goal can be understood as the goal of both the motion event expressed by the verb and that expressed by the directional form.

3.3. Old Chinese syntactic constructions.

The syntactic configurations shown in (1) above were created by at least two syntactic constructions operating in the grammar of Old Chinese, the unmarked verb phrase co-ordination construction and the contiguous serial verb construction. These constructions are described below.

3.3.1. The unmarked verb phrase co-ordination construction.

The self-agentive motion constructs shown in (1a) and (1c) in section 3.2 above are made up of two verb phrases that are co-ordinated by the unmarked verb phrase co-ordination construction. This construction was one of several verb phrase co-ordination constructions operating in the grammar of Old Chinese. This co-ordination construction was used to co-ordinate verb phrases where the events described by each phrase were understood to occur in sequence. Any type of verb phrase could be co-ordinated by this construction — it was not limited to unifying with directional verbs. The verbs within the verb phrases co-ordinated could also have any argument configuration. Some examples of constructs produced by the unmarked verb phrase co-ordination construction are shown in (3) below. (3d) is repeated from (1a) above.

(3) Constructs formed by the verb co-ordination construction.

- a. 擊 李 由 軍 破 之。
 jī lǐ yóu jūn pò zhī.
attack Li You army destroy 3.s

‘He attacked Li You’s army and destroyed it.’

(*Shiji* 史記, 54.4, ca. 91 BC)

- b. 若 雖 長 大， 好 帶 刀 劍， 中 情 怯 耳。
 ruò suī cháng dà, hào dài dāo jiàn, zhōng qíng qiè ěr.
 you although long big, like carry knife sword, inside feeling cowardly PART.

‘Though you may be tall and big and like to carry a knife and a sword, inside your temperament is still cowardly.’

(*Shiji* 史記, 32.3, ca. 91 BC)

- c. 必 連 兵 還 鄉 以 攻 關中。
 bì lián bīng huán xiāng yǐ gōng guānzhōng.
 must join soldier go.back countryside in.order.to attack Guanzhong.
 ‘...[we] must unite the soldiers and go back to the countryside to attack Guanzhong.’
 (*Shǐjì* 史記, 8.85, ca. 91 BC)
- d. 張 耳 與 趙 王 歇 走 入 鉅鹿 城...
 zhāng ěr yǔ zhào wáng xiē zǒu rù jùlù chéng...
 Zhang Er with Zhao king stop flee move.in Julu city...
 ‘Zhang Er and the king of Zhao stopped and ran into Julu city...’
 (*Shǐjì* 史記, 89.14, ca. 91 BC)

It can be seen from the examples in (3) that other verbs besides directional verbs could appear in the verb phrases co-ordinated by this construction. It can also be seen that they can have many different argument configurations. The argument configurations shown above are: two transitive verbs in (3a) and (3c), two intransitive verbs in (3b), and an intransitive verb plus a transitive verb in (3d). Even though there was great diversity in the constructs produced by the unmarked verb phrase co-ordination construction, I will focus only on those constructs where a directional verb appears as the head of the last verb phrase co-ordinated because it is these constructs that were reanalysed to create the modern directional constructions.

There were several other verb phrase co-ordination constructions operating in Old Chinese that explicitly marked the co-ordinate relationship between the two verb phrases with a conjunction. The most common conjunction used for this purpose is *ér* 而. Some examples of co-ordination with *ér* are shown in (4) below.

(4) **Co-ordination with *ér*.**

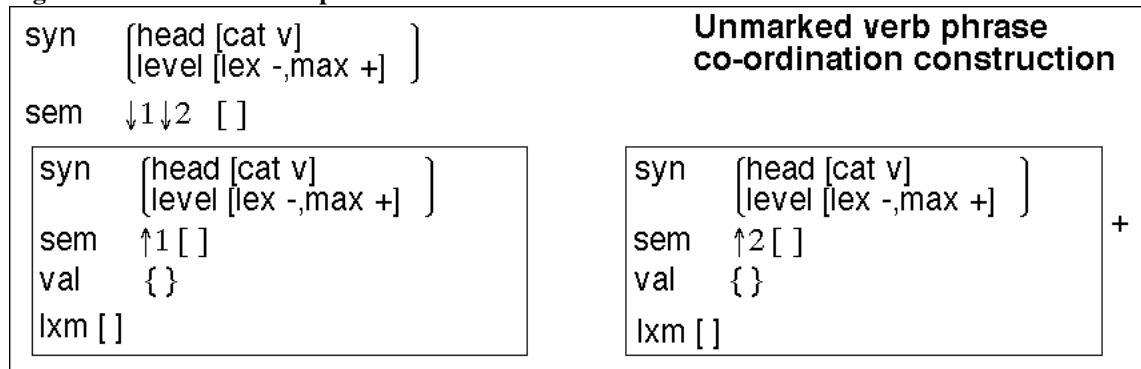
- a. 豹 自 後 擊 而 殺 之。
 bào zì hòu jī ér shā zhī.
 Bao from behind attack and kill 3.s.
 ‘Bao attacked from behind and killed him.’
 (*Zuǒzhuàn* 左傳, *Xiāng Gōng* 23 襄公二十三, p. 1076, 475 BC)
- b. 李 克 趨 而 出...
 lǐ kè qū ér chū...
 Li Ke patter.quickly and move.out...
 ‘Li Ke pattered quickly and went out...’
 (*Shǐjì* 史記, 44.10, ca. 91 BC)

This type of construct is both structurally and semantically similar to those produced by the unmarked verb phrase co-ordination construction. It also co-ordinates verb phrases that are understood to describe events that occur in sequence. However the presence of the conjunction *ér* 而 highlights

the co-ordinate relationship between the two verb phrases. In the unmarked construction there is no overt conjunction and so the co-ordinate relationship is less explicit. It is probably because the co-ordinate relationship was less explicit that constructs formed with the unmarked verb phrase co-ordination construction were more susceptible to reanalysis.

A box diagram of the unmarked verb phrase co-ordination construction is shown in figure 3.1 below.

Figure 3.1 Unmarked verb phrase co-ordination construction.



The construction takes two or more verb phrases that are maximally expanded (*lex -*, *max +*). The Kleene + at the right hand of the second verb phrase slot indicates that there can be one or more instances of this slot. That is, this slot can be repeated and more verb phrases can be co-ordinated in the construction after the first two. I have not been able to identify an example of this from this period in the corpus, however there is no reason to suppose that it was not possible. Unmarked co-ordination of more than two verb phrases that describe actions that occur in sequence is certainly possible in Modern Mandarin.

Note that the external syntactic attributes of the parent construction are identical to its child constructions. This construction could therefore recursively unify with itself. This would allow embedded co-ordinate constructs to be produced. The construct in (3b) provides a good example of this. The two verb phrases *cháng* 長 ‘long’ and *dà* 大 ‘big’ are co-ordinated with each other to form the first verb phrase that ends at the first comma. This larger verb phrase is then co-ordinated with the verb phrase headed by *hào* 好 ‘like’, which ends at the second comma, to produce the verb phrase of the next level. We can see that these two phrases form a co-ordinated verb phrase because the form *sū* 雖 ‘although’ has scope only over these two phrases. This larger verb phrase is then co-ordinated with the last verb phrase. Altogether there are three levels of embedding of unmarked co-ordination in this construct. These layers are shown in the bracketed construct in (5) below.

(5) **Layers of embedding in construct in (3b).**

[[若 雖 [長 大], 好 帶 刀 劍], 中 情 怯 耳]。
ruò suī cháng dà, hào dài dāo jiàn, zhōng qíng qiè ěr.
you although long big, like carry knife sword, inside feeling cowardly PART.

3.3.2. The contiguous serial verb construction.

The caused motion directional construct shown in (1b) in section 3.2 above and repeated in (6b) below, was produced by the contiguous serial verb construction of Old Chinese.

The term ‘serial verb construction’ is used quite frequently to describe a very broad range of constructions in the world’s languages that often have very little in common. Many linguists have attempted to formulate cross-linguistically valid definitions of serial verb constructions (see, for example, Foley and Olson 1985:18; Sebba 1987:86-87; Durie 1997:291; Andrews and Manning 1999:108-110). These definitions differ in the details, but the common thread running through all of them is that serial verb constructions should create constructs made up of two or more verbs that are not marked overtly for co-ordination or subordination and that the verbs in these constructs should to a certain degree share grammatical features, such as tense, aspect and mood, and should share some of their arguments and adjuncts. The contiguous serial verb construction fits this description.

One other feature that is often cited is that serial verb constructions should describe single events. However, it is not entirely clear that serial verb constructions always do describe single events (for a discussion of this issue, see Foley ms). As is shown in section 4.3 many of the examples produced by the serial verb construction described here are ambiguous between a single event and multiple event interpretation. I will not claim that the Old Chinese serial verb constructions necessarily had to describe a single event.

The contiguous serial verb construction takes precisely two verbs. The verbs in the construction must share all their arguments. Some examples of constructs created with the contiguous serial verb construction are shown in (6) below. It can be seen from these examples that the contiguous serial verb construction is not limited to unifying with directional verbs.²

² Note that in (6b) the directional verb *lái* 來 has a causative meaning ‘make *x* come’. Many directional verbs in Old Chinese could alternate between causative and non-causative meanings. This is discussed in section 3.5. A construction grammar description of how the causative variant of *lái* would be derived is also presented in this section.

(6) **Constructs produced by the contiguous serial verb construction.**

- a. 與 秦 擊 敗 楚 於 重丘。
yǔ qín jī bài chǔ yú chóngqiū
with Qin attack defeat Chu PREP Chongqiu.
‘With Qin [he] attacked and defeated Chu at Chongqiu.’
(*Shǐjì* 史記, 46.36, ca. 91 BC)
- b. ...將 招 來 神 僊 之 屬。
...jiāng zhāo lái shén xiān zhī shǔ.
...then summon make.come spirit immortal POS attach.
‘...then he called forth the various spirits and their ilk.’
(*Shǐjì* 史記, 12.42, ca. 91 BC)
- c. 盡 除 去 先 帝 之 故 臣...
jìn chú qù xiān dì zhī gù chén...
completely remove get.rid.of former emperor POS original vassal...
‘[He] completely replaced the former emperor’s original vassals...’
(*Shǐjì* 史記, 87.24, ca. 91 BC)

One key feature of the contiguous serial verb construction, and the reason why it has the designation ‘contiguous’, is that the two verbs in the construction cannot be separated. For example, in (6c) above, repeated from (1b) in section 3.2, the pre-verbal modifier *jìn* 盡 appears before both verbs. It is impossible to insert it between the two verbs.

Since the verbs in the contiguous serial verb construction cannot be separated and must share all their arguments, they are clearly bound together very tightly. Analyses of the constructs produced by this construction as either serialised verbs or as compound verbs are both defensible. In my description I assume that the contiguous serial verb construction is a serial verb construction that produces a serial verb construct and not a morphological construction that produces a compound word. There is not really enough data available to make this distinction, however. Most accounts that differentiate between compounds and serialised structures appeal to phonological attributes. For example, in his analysis of verb serialisation and verb compounding in Paamese, a language of Vanuatu, Crowley (1987:60) differentiates between compounds and serialisation on phonological grounds. The verb morphemes in compounds display word-internal morphological processes, while serialised forms do not. Even if similar phonological distinctions existed in Old Chinese, they are obscured by the writing system and so are not available for examination today. I have decided not to make an absolute distinction in the case of the construction under examination here and so have settled for Durie’s (1997:302-303) fairly neutral term ‘contiguous serialisation’ to describe the serial verb construction investigated here.

From the data available it is not possible to distinguish a construct produced through unmarked verb co-ordination where there are no objects and no intervening modifiers from a construct produced

by the contiguous serial verb construction with no object. Such an ambiguous construct is shown in (7) below, where *qǐ* 起 and *wǔ* 舞 could either be within a serial verb structure or a unmarked co-ordinate structure.

(7) **Ambiguous construct, serial verb or biclausal construct.**

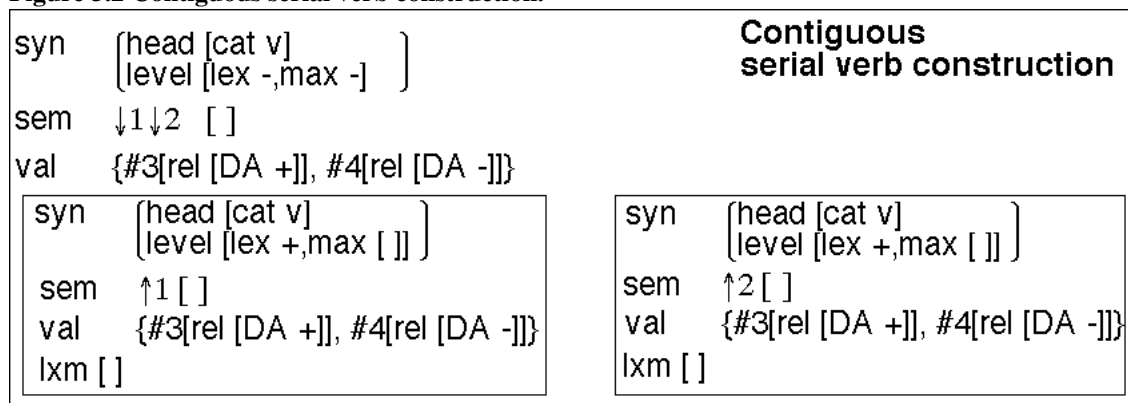
項	莊	拔	劍	起	舞
xiàng	zhuàng	bá	jiàn	qǐ	wǔ
Xiang	Zhuang	remove	sword	get.up	dance

‘Xiang Zhuang took out his sword, got up and danced.’
(Shiji 史記, 7.31, ca. 91 BC)

It is always clear, however, that a construct with one object noun phrase where the verbs share the same object, like those in (6), is the product of the contiguous serial verb construction, since the two verbs share all their arguments. When faced with an ambiguous construct that is not a clear instance of the contiguous serial verb construction, I assume that it is a product of the verb co-ordination construction.

A box diagram of the contiguous serial verb construction is provided in figure 3.2 below.

Figure 3.2 Contiguous serial verb construction.



The contiguous serial verb construction takes two lexical verbs that can be either maximally expanded or not (*lex +, max []*). The serial verb construction binds the verbs together into a phrasal construction that is not maximally expanded (*lex -, max -*) and so must unify with other phrasal constructions to build a complete verb phrase. The semantic attributes and valence attributes of the child verb constructions are integrated into the parent serial verb construction.

The arguments marked as DA + (distinguished argument +) and DA - (distinguished argument -) in the valence feature of the parent construction are linked to the DA + and DA - arguments of the two child verb constructions through the indices #3 and #4.³ This means that the DA + and DA -

³ For an explanation of the attributes DA + and DA -, see section 1.2.1.

arguments of the child constructions are conflated in the parent construction. The DA + and DA - arguments of the child constructions must have the same semantic roles so that they can be conflated. For example, in (6b) above, the object of the two verbs in the serial construct is *shén xiān zhī shǔ* 神僊之屬 ‘various spirits and their ilk’. Since this is a normal active sentence, *shén xiān zhī shǔ* is presumably the realisation of the arguments marked as DA - in the valence features of the two verbs. The argument marked as DA - in the valence of *zhāo* 招 ‘summon’ has the semantic role of theme and corresponds to the frame element of the ‘thing summoned’. The argument marked as DA - in the valence attribute of *lái* 來 ‘make.come’ also has the semantic role of theme and corresponds to the frame element ‘thing made to come’. These two arguments marked as DA - in the valence features of the verb constructions can be conflated because they have the same semantic role. The DA + arguments of these two verbs are both agents and so these can also be conflated.

If the semantic roles of the DA + and DA - arguments of the two verb constructions were not the same, then they could not be conflated and the verb constructions could not unify alongside each other in the contiguous serial verb construction. For example, if *chú* had a theme marked as DA - and *qù* had a source marked as DA -, then these two arguments could not be conflated and the constructions would not unify. In fact, in Old Chinese many directional verbs, including *lái*, had to be derived so that their argument structures matched those of displacement and physical action verbs they appeared alongside in the contiguous serial verb construction. This is discussed in section 3.5.

Note that the head attribute of the parent construction is not linked to any of the child constructions as it is in most other constructions discussed so far (cf. any of the Modern Mandarin syntactic directional constructions presented in chapter 2). This is because each of the child verb constructions has equal weight within the serial verb construction and so none of them can be identified as the head. The box diagram above also stipulates that both verbs that appear in the contiguous serial verb construction must be transitive (since they must have both DA + and DA - arguments). My decision to make this stipulation flows from the assumption set out above that any construct in Old Chinese that is not a clear instance of the contiguous serial verb construction, with a subject and an object argument shared between the two verbs, must be a construct produced by the unmarked verb phrase co-ordination construction.

3.4. Old Chinese directional verb constructions.

The lexical directional forms that appear in Old Chinese are created by verb constructions. In the *Zuǒzhuàn* 左傳, a text from the Warring States period (475-221 BC), there are about seven directional verbs that appear in the serial verb constructions described in section 3.3 above. These

verbs are listed in table 3.1 below. This list is derived from information in Guan (1994:232-233), He (2005:229) and my own corpus research. ⁴

Table 3.1. Directional verbs in the Zuozhuan.

verb	meaning
chū 出	‘move out’
rù 入	‘move in’
guò 過	‘move across’
jìn 進	‘move forward’
qù 去	‘leave’
zhì 至，致	‘reach’, ‘transmit’
lái 來	‘come’
guī 歸	‘move back’

Some representative examples of these forms are provided in (8) below.

(8) **Directional verbs in the Zuǒzhuan.**

- a. 走 出， 遇 賊 于 門。
 zǒu chū, yù zéi yú mén.
 flee go.out, encounter thief at door.
 ‘[He] ran and went outside, and met the thief at the door.’
 (Zuǒzhuan 左傳, Zhuāng Gōng 8th year 莊公八年, p. 175, ca. 475 BC)

- b. 郤 克 趨 進 曰...
 xì kè qū jìn yuē...
 Xi Ke patter.quickly go.forward say...
 ‘Xi Ke rushed forward and said...’
 (Zuǒzhuan 左傳, Chéng Gōng 3rd year 成公三年, p. 815, ca. 475 BC)

- c. 秋， 鄭 詹 自 齊 逃 來。
 qiū, zhèng zhān zì qí táo lái.
 autumn, Zheng Zhan from Qi flee come.
 ‘In the autumn, Zheng Zhan came fleeing from Qi.’
 (Zuǒzhuan 左傳, Zhuāng Gōng 17th year 莊公，十有七年, p. 204, ca. 475 BC)

⁴ zhì 致 ‘transmit’ is a causative variant of zhì 至 ‘reach’. These forms were morphologically distinct variants of each other. They are discussed in section 3.5 below.

- d. ...逃 歸 其 國...
 ...táo guī qí guó...
 ...flee return POS country...
 ‘...[he] fled back to his country...’
 (*Zuǒzhuàn* 左傳, *Xī Gōng 15th year* 僖公十五年, p. 364, ca. 475 BC)

In the time between the writing of the *Zuǒzhuàn* in the Warring States period (475-221 BC) and the writing of the *Shǐjì* 史記 in around 91 BC many more new collocations involving different first verbs and directional verbs appeared in the language. The new directional verbs that appear in the *Shǐjì* are *shàng* 上 ‘move.up’, *xià* 下 ‘move.down’, *huán* 還 ‘move.back’, *qǐ* 起 ‘move.upwards’ and *dào* 到 ‘reach’ (He [1984]2005:277-281; He 2005:229-235). Examples of these are shown in (9) below.⁵

(9) **New directional verbs attested in the *Shǐjì*. Directional verbs with theme objects.**

- a. 蓄川 國 復 推 上 公 孫 弘。
 zīchuān guó fù tuī shàng gōng sūn hóng.
 Zichuan country again push go.up Gong Sun Hong.
 ‘The country of Zichuan again pushed and raised (recommended) up Gong Sun Hong.’
 (*Shǐjì* 史記, 52.3, ca. 91 BC)

- b. ...乃 持 鐵 盾 入 到 營。
 ...nǎi chí tiě dùn rù dào yíng.
 ...then take iron shield move.in reach camp.
 ‘...then [they] took up their iron shields and went into the camp.’
 (*Shǐjì* 史記, 95.5, ca. 91 BC)

- c. 漢 王 使 酈 生 往 說 下 齊 王 廣 及 其 相 國 橫。
 hàn wáng shǐ lì shēng wǎng shuì xià qí wáng guǎng jí qí xiàngguó héng.
 Han king send Li Sheng repeatedly persuade lower Qi king Guang and his prime.minister Heng.
 ‘The king of Han sent Li Sheng to repeatedly to talk King Guang of Qi and his prime minister Heng into submission.’
 (*Shǐjì* 史記, 94.7, ca. 91 BC)

Directional verb with location object.

- d. 迴 車 馳 還...
 huí chē chí huán...
 turn chariot gallop go.back...
 ‘[He] turned around his chariot and galloped back...’
 (*Shǐjì* 史記, 49.24, ca. 91 BC)

⁵ Note that *dào* only appears once in the entire *Shǐjì* and does not appear again until the Song Dynasty (AD 960-1279). It is therefore most likely a scribal error from a later time and not a true reflection of the time of emergence of this form.

Directional verb with no object.

- e. 今 以 法 割 削 之， 則 逆 節 萌 起...
jīn yǐ fǎ gē xiāo zhī, zé nì jié méng qǐ...
today use law cut pare.down 3.s, then counter bamboo.joint sprout move.up...
‘[If] now you use the law to cut them [the nobles] down and whittle them away, then going against the bamboo joint (i.e., against the grain) will sprout...’
(*Shǐjì* 史記, 102.26, ca. 91 BC)

Note that the transitivity of the directional verbs in Old Chinese is a complex issue. Almost all the verbs can have two argument structure configurations, one where they take a location object and the other where they take a theme object. The former configuration is used in situations where the directional form describes self-agentive motion and the latter in situations where the directional form describes caused motion. The only exception to this principle is the directional verb *qǐ* 起, which cannot take a location argument. This form retains this unusual behaviour both as a verb and as a particle in Modern Mandarin, as is shown in section 2.2.2. The syntactic configuration of constructs where the directional verb takes a theme object is created by the contiguous serial verb construction and the construct where it only takes a location argument are created by the unmarked verb phrase co-ordination construction. Both these constructions were described in section 3.3. Many of the directional verbs had to be derived to take on one or the other argument structures. This process of derivation is described in section 3.5.

At the same time that new directional verbs started to appear in the unmarked co-ordination construction and the contiguous serial verb construction, new collocations of the other directional verbs with different first verbs were also starting to appear. Table 3.2 provides a count of the different types containing directional verbs in the *Zuǒzhuàn* and the *Shǐjì*. The data are based on Guan (1994:232-233), He ([1984]2005:277-281), He (2005:229-238) and my own corpus research.

Table 3.2. Type count of directional verbs in Old Chinese.

form	types in <i>Zuǒzhuàn</i> 左傳	types in <i>Shǐjì</i> 史記
<i>chū</i> 出 ‘move.out’	3	12
<i>rù</i> 入 ‘move.in’	6	17
<i>guò</i> 過 ‘move.across’	1	5
<i>jìn</i> 進 ‘move.forward’	2	3
<i>shàng</i> 上 ‘move.up’	0	9
<i>xià</i> 下 ‘move.down’	2	11
<i>huán</i> 還 ‘move.back’	0	6
<i>lái</i> 來 ‘come’	1	5
<i>qù</i> 去 ‘leave’	1	22
<i>qǐ</i> 起 ‘move.upwards’	0	6
<i>zhì</i> 至 ‘reach’	1	14
<i>zhì</i> 致 ‘transmit’	1	3
<i>dào</i> 到 ‘reach’	0	1
<i>guī</i> 歸 ‘move.back’	6	15

From the data in table 3.2 it can be seen that in the *Zuǒzhuàn* there are only a few collocations attested involving directional verbs, while in the *Shǐjì* the number increases significantly (by half in most cases). This change observable in the data perhaps demonstrates the increasing productiveness of collocations involving directional verbs. Note, however, that the *Shǐjì* is about twice as long as the *Zuǒzhuàn* (the *Shǐjì* is around 500,000 characters and the *Zuǒzhuàn* 200,000 characters). There are some seemingly erratic changes in the data as well. The directional form *qù* 去 is attested only once in the *Zuǒzhuàn* but is attested twenty-two times in the *Shǐjì*. These erratic examples are probably a side effect of dealing with a small corpus. The overall trend seems to be that the directional forms were becoming more common. Note that many of the directional verbs that appear in this table, such as *shàng* 上, *lái* 來, *guò* 過 and so on, have gone on to become directional particles in Modern Mandarin. Others, such as *guī* 歸 and *huán* 還, do not survive in Modern Mandarin, having been replaced by *huí* 回, while some, like *dào* 到 are still found in Modern Mandarin, but do not properly belong to the class of directional particles, as is shown in section 2.4

The directional verbs in Old Chinese are simply normal verb constructions. They do not have any unique formal features that set them apart from other verbs. A box diagram of a directional verb construction in Old Chinese, **thjut* [*chū*] 出 ‘move out’, is shown in figure 3.3 below.

Figure 3.3 Old Chinese directional verb.

syn	[head [cat v] level [lex +, max []]]	Verb “*thjut (chu)”
sem	[frame CHU(move out) FE #1 [mover] FE #2 [place moved from] ...]	
val	{#1[rel [θ agent DA +]], #2[rel [θ source DA -]]}	
lxm	[THJUT]	

The box diagram makes it clear that **thjut* [*chū*] 出 ‘move out’ is a typical verb construction. It is a lexical verb that is can be further expanded (*lex +, max []*), ready to take any derivational morphology or be taken up into a syntactic construction. Its semantic feature contains a frame attribute which holds its arguments. It also has a valence feature for the syntactic expression of its arguments.⁶

3.5. Old Chinese derivational morphology.

As is pointed out in section 3.3.2, there was a productive system of verb morphology operating in Old Chinese. Within this system there were many different morphological processes with different functions. The most important of these processes in terms of the development of the directional forms is the process usually called *sì shēng bié yì* 四聲別義 ‘four tones differentiate meaning’. This process usually goes by this name because its clearest reflex in later varieties of Chinese is an alternation in the reading of characters in one of the three Middle Chinese (AD 200-1000) tone classes *píngshēng* 平聲 ‘level tone’, *shǎngshēng* 上聲 ‘rising tone’, *rùshēng* 入聲 ‘entering tone’ and the fourth tone class *qùshēng* 去聲 ‘departing tone’. Although this morphological difference was realised in Middle Chinese as a difference in tone, it is most likely that the original form of this morphological process in Old Chinese (500 BC-AD 200) was a segmental suffix *-s inherited from proto-Sino-Tibetan (Baxter 1992:313-319; Mei [1980]2000:315-319; Sagart 1999:131-132). It is not entirely clear when this suffix developed from a segmental form to a tonal alternation, although Pulleyblank (1973), who cites transcription and rhyming evidence, claims that the segmental form *-s was still current in the South of China in the early sixth century, about half way through the Middle Chinese period. Mei ([1991]2000:236) comes to a similar conclusion. I will refer to this process as derivation by *-s.⁷

⁶ The diagram in figure 3.3 is explained in detail under the discussion of figure 1.1 in chapter 1, which is a reproduction of figure 3.3.

⁷ Note that much of the evidence for reconstructing *-s is fairly indirect. However, most linguists working on Chinese accept the reconstructed form *-s, although some linguists in mainland China still reject it. For discussion of the issues surrounding the reconstruction of *-s, see the sources cited in this section.

Derivation by *-s appears to serve a variety of functions. There is much discussion among linguists about how these functions should be described and how they are related to each other. Downer (1959) suggests that *-s derivation performs no fewer than eight functions, including deriving verbs from nouns, deriving nouns from verbs, deriving causatives, deriving passives, and so on. Mei ([1980]2000), on the other hand, claims that there were basically three functions associated with *-s in the later stages of Old Chinese: to derive denominal verbs, to derive causatives and, later, to derive deverbal nouns.

An even more minimalist view is expressed by Schüssler (1985:349), who claims that there is only one function associated with *-s derivation, which is to ‘invert the attention flow’, which basically means to derive intransitives or reflexives from transitive verbs. All the other functions that seem to correlate with the *-s arise from its interactions with other constructions in the language. For example, he claims that the causative use of a basically transitive verb like *chū* 出 could be formed by first deriving *chū* with *-s so that it becomes intransitive. The argument structure of the verb changes from ‘move out from [somewhere]’ to simply ‘move out’. When this intransitive verb is used in a sentence with a non-location object (a common occurrence in Old Chinese, as is shown below), the verb is taken to be causative and the object interpreted as a theme. According to Schüssler’s analysis *-s does not derive the causative, it merely derives a form that is associated with the causative. Schüssler’s analysis is certainly a clever attempt to draw together the many functions attested for *-s. However, there is also no reason to suppose that *-s did not have multiple functions or even that the various functions of *-s come from homophonous morphemes that had multiple origins, like the inflection -s in modern English, which can be used to mark plural or possessive forms of nouns, or third person singular agreement on verbs. Since the precise nature of *-s in Old Chinese is not clear, I will only describe the relevant functions of *-s that are directly attested in the data without trying to find a more general explanation.

In terms of the directional verbs, the most important function of derivation by *-s is the derivation of causative verbs from non-causative verbs. This process is important because, as discussed in section 3.3.2, verbs in the contiguous serial verb construction had to have arguments with compatible semantic roles marked as DA + and DA -. Derivation by *-s can be used to give directional verbs argument structures compatible with caused-motion verbs so that they can unify alongside each other within the contiguous serial verb construction. Two directional verbs that are attested as occurring in the non-causative to causative derivation are *chū* 出 ‘move out’ and *lái* 來 ‘come’ (Downer 1959:281-283, 287-288), which are shown in (10) below.

(10) Derivation of causatives with *-s.

出		出
*thjut	→	*thjuts
‘move out of’		‘move x out’
來		來，徠，來+力
*C-ri(k)	→	*C-ri(k)s
‘come to’		‘make x come’

The verb **thjut* [chū] shown in (10) above conveys self-agentive motion. In its valence it has a theme argument marked as DA + and a source argument marked as DA -. It would not be able to appear in the construct in (11) below, since this construct conveys caused motion and so would require a verb with an agent argument marked as DA + and a theme marked as DA -. The derived form of **thjut*, **thjut-s*, would be able to appear in this construct, however, since, as a causative, it does have an agent marked as DA + and a theme marked as DA - in its valence.⁸

(11) Grammaticality of causative and non-causative *chū* in contiguous serial verb construction.

秦	王	甚	愛	張	儀	而	不 [for 必]	欲	出	之
qín	wáng	shèn	ài	zhāng	yì	ér	bú [for bì]	yù	chū	zhī.
Qin	king	very	love	Zhang	Yi	and	not [for certainly]	want	<u>move.out</u>	3.s.
									*THJUT	
									THJUT-S	

‘The king of Qin greatly loved Zhang Yi and wanted to move him out (i.e., break him out) [of gaol].’
(*Shǐjì* 史記, 70.20, ca. 91 BC)

Some verbs, such as *qù* 去, appear to operate in the opposite direction (Downer 1959:287). The basic variant of *qù* 去 in Old Chinese, which is reconstructed without the *-s suffix is causative, while the derived variant reconstructed with the *-s suffix is non-causative. This is shown in (12) below. The derived variant of *qù* 去 would have had to be used when the verb appeared in the unmarked verb phrase co-ordination construction and described self-agentive motion.

(12) Derivation of non-causative with *-s.

去		去
*kh(r)ja	→	*kh(r)jas
‘make x go away’		‘leave’

⁸ The asterisk (*) before the form ‘THJUT’ in (11) indicates that this form would be ungrammatical, not that it is a reconstruction.

It appears that it was also possible in Old Chinese to use many directional verbs that did not have theme arguments in their valence features as causatives without overt change in form (Norman 1988:102). The system for deriving causative and non-causative verb in Old Chinese was therefore a mixed system, with some lexical constructions requiring explicit morphological derivation and others not. In terms of the formalism used here, however, it is best to say that these forms are also derived, it is just there is no change in form attached to the derivation. If we do not recognise derivation then we need to find another means for altering the valence features of these directional verb constructions. Some examples of directional verbs that are not recorded as having a change in form when derived as causatives are given in (13) below.

(13) **Directional verbs that participate in the causative/non-causative alternation with no change in form.**

- a. ...乃 進 兵 擊 秦 嘉。
 ...nǎi jìn bīng jī qín jiā.
 ...then move.forward troops attack Qin Jia.
 ‘...then [he] moved his troops forward to attack Qin Jia.’
 (*Shǐjì* 史記, 7.9, ca. 91 BC)
- b. 且 先 帝 起 諸侯 兼 天下。
 qiě xiān dì qǐ zhūhóu jiān tiānxià.
 furthermore former emperor raise.up nobles share world.
 ‘Furthermore, the former emperors raised up the nobles and shared the world.’
 (*Shǐjì* 史記, 6.9, ca. 91 BC)

There were other functions of derivation by *-s outside the causative/non-causative alternation. In some cases it seems to derive the directional verbs from an entirely different word class. For example, it seems that the directional form *xià* 下 was most basically a noun and only served as a verb when derived by *-s. Conversely, the directional verb *shàng* 上 could serve as a noun when derived by *-s (Downer 1959:276, 280). This can be seen in (14) below.⁹

⁹ In Middle Chinese *shàng* 上 as a verb was pronounced in the Middle Chinese rising tone. The Modern Mandarin reflex of this pronunciation is preserved in the Modern Mandarin name for the rising tone *shǎngshēng* 上聲 but nowhere else. As a noun *shàng* was pronounced in the departing tone, the Modern Mandarin reflex of which is the fourth tone *shàng*. These are the expected reflexes of the basic form and the form derived with *-s from Old Chinese. The only form that survives as a productive morpheme in Modern Mandarin appears as if it were the reflex of the derived form, being pronounced in the Modern Mandarin fourth tone *shàng*. However, *shàng* is in fact the reflex of both the rising tone and the departing tone forms, since there was a regular sound change between the Middle Chinese and the Modern Mandarin periods where syllables in the rising tone that had voiced initials shifted to the departing tone (Pulleyblank 1978:181).

(14) Derivation of noun from verb with *-s.

下		下
*graʔ	→	*graʔs
‘below’		‘lower’
上		上
*djang	→	*djangs
‘ascend’		‘above, top’

From the evidence presented above it is clear that derivation by *-s played a significant role in producing directional verb constructions that had the attributes that allowed them to unify with the unmarked verb phrase co-ordination construction and the contiguous serial verb construction. It also seems that there were probably several derivation suffixes with different functions that all had the form *-s. Below is an example of derivation of the directional verb *C-ri(k)* [*lái*] 來 ‘come’ with the suffix *-s to produce a causative verb that can unify with the verb *zhāo* 招 ‘summon’ within the contiguous serial verb construction to make the construct *zhāo lái* 招來 ‘summon and make *x* come’. This construct is shown in (15) below. It is repeated from (1b) in section 3.2 above.

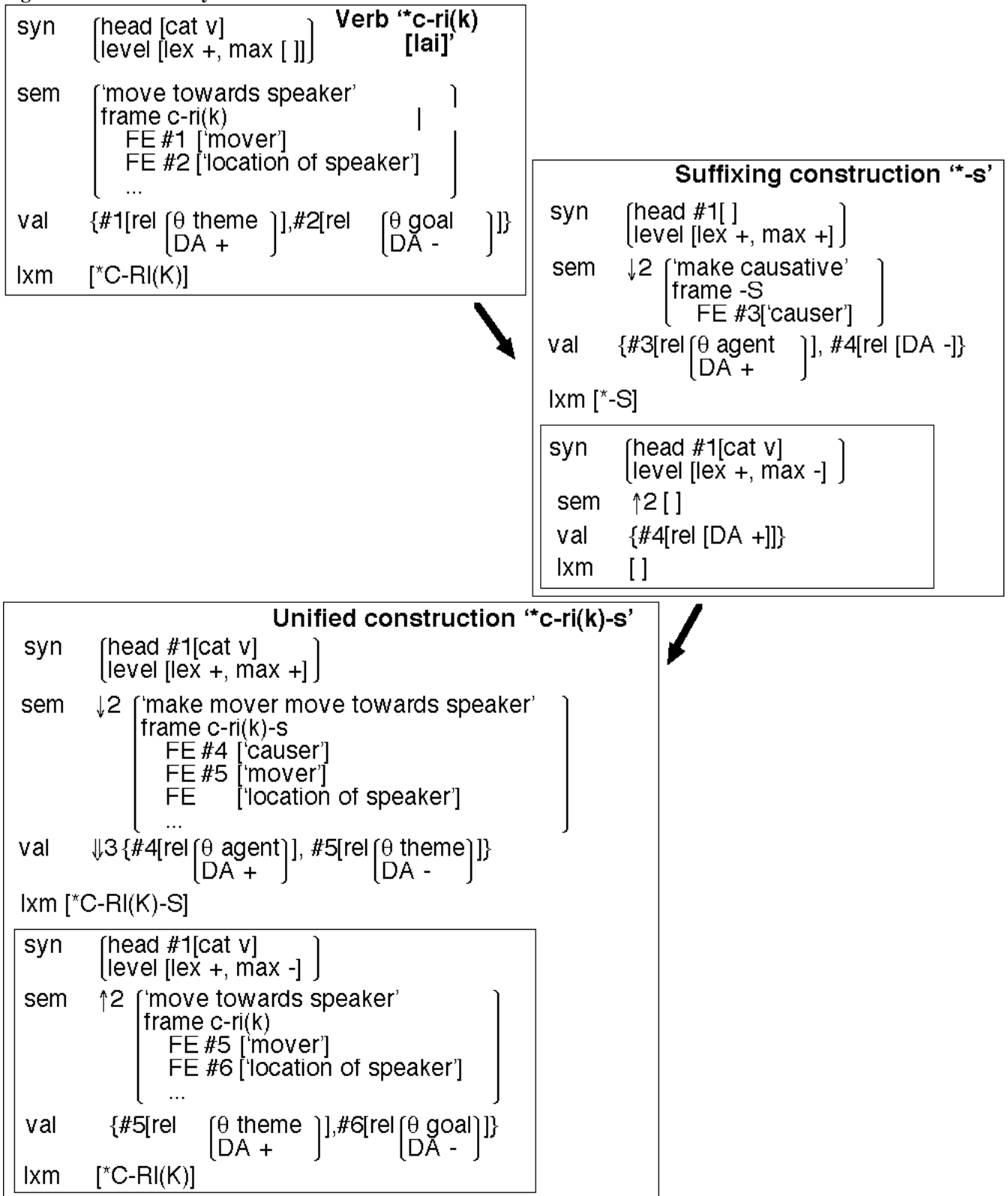
(15) Construct of *zhāo* and derived *lái* in contiguous serial verb construction.

...將	招	來	神	僊	之	屬。
...jiāng	<u>zhāo</u>	<u>lái</u>	shén	xiān	zhī	shǔ.
...then	<u>summon</u>	<u>come</u>	spirit	immortal	POS	attach.

‘...then he called forth the various spirits and their ilk.’
 (*Shiji* 史記, 12.42, ca. 91 BC)

The diagram in figure 3.4 below shows how the verb construction **C-ri(k)* [*lái*] is derived by the verb suffixing construction *-s to produce a causative form with a theme argument and the form **C-ri(k)-s*. For a detailed explanation of how the process depicted in this diagram works, see the discussion of figure 1.2 in section 1.2.1.

Figure 3.4 Derivation by -s.



The construction *C-ri(k)-s that emerges from this unification can unify with the contiguous serial verb construction alongside the verb *zhāo* 招 to create the construct *zhāo lái* 招來. The semantic attributes of the two verbs combine. The arguments marked as DA + and DA - in the valence features

of the two verb constructions are conflated when they integrate with the valence attribute of the parent construction. The final unified construction is shown in figure 3.5 below.

Figure 3.5 Unified construction.

Construct 'zhaolai'	
syn [head [cat v] [level [lex -,max-]]] sem ↓1↓2 ['summon and make come' [...]] val {#3[rel [θ agent] [DA+]], #4[rel [θ theme] [DA-]]}	
syn [head [cat v] [level [lex +,max-]]] sem ↑1 [frame summon FE #5 [summoner] FE #6 [summoned]]] val {#3#5[rel [θ agent] [DA+]], #4#6[rel [θ theme] [DA-]]} lxm [TJAW]	syn [head [cat v] [level [lex +,max-]]] sem ↑2 [frame 'make come' FE #7 [causer] FE #8 [causee]]] val{#3#7[rel [θ agent] [DA+]], #4#8[rel [θ theme] [DA-]]} lxm [C-KHRI(K)-S]

One other morphological process in Old Chinese that seems to be significant for the development of the directional forms is a form that Sagart (1999:111-112) reconstructs as an infix **-r-*. This morphological derivation was first recognised by its reflex in Middle Chinese, which took the form of an alternation between voiced and voiceless initials. This infix was used to derive *zhì* 致 'transmit' from *zhì* 至 'reach'. This process is shown in (16) below.¹⁰

(16) **Derivation by **-r-*.**

至		致
*tjits	→	*trjits
'reach'		'transmit'

Sagart claims that the function of the **-r-* infix is to 'intensify' the meaning of the word it derives. In the case of verbs this means that it typically makes an described by a verb iterative or distributive, or creates the implication that the action requires some effort on the part of the agent. It does not have a directly causative function. It merely reinforces it, as Schüssler claims for the suffix **-s*.

¹⁰The pronunciation shown is reconstructed according to Baxter's system and so is not precisely the same as that given by Sagart.

3.6. Conclusion.

There were no true directional constructions in Old Chinese. There were, however, constructs that looked superficially similar to those produced by the modern directional constructions. These constructs were formed by directional verbs unifying with displacement and physical action verbs within Old Chinese verb phrase constructions. There were two of these constructions that created the different structural configurations that can be seen in the Old Chinese directional forms. These are the unmarked verb co-ordination construction and the contiguous serial verb construction. The contiguous serial verb construction typically produced constructs that describe caused motion in a particular direction, while the unmarked verb phrase co-ordination construction produced constructs that describe self-agentive motion.

The directional verbs in Old Chinese were not all alike. There was a system of derivational morphology in Old Chinese that was used with some directional verbs. There were many different functions associated with these derivations, but the most significant in terms of the directional verbs were deriving causative verbs from non-causatives and vice versa. These derivations allowed directional verb constructions to be made with the valence attributes required to unify with the contiguous serial verb construction and the unmarked verb phrase co-ordination construction to produce the constructs that were reanalysed to create the modern directional constructions.

4. The diachronic development of the directional constructions.

4.1. Introduction.

This chapter examines how the modern directional constructions came into being. It traces the various stages of reanalysis the directional forms in earlier varieties of Chinese underwent to create the modern constructions. The factors that motivated these reanalyses are also discussed. The reanalyses that occurred in the syntax of the directional forms are discussed in section 4.2, and the reanalyses that occurred in the semantics of the directional forms are discussed in section 4.3.

4.2. The syntactic reanalyses of the directional forms.

The development of the modern syntactic directional constructions was shaped by two processes that were occurring in Middle Chinese (AD 201-1000), the process of decausativisation and the tendency towards disyllabification. Below each of these processes and their significance to the development of the syntactic directional constructions are discussed.

4.2.1. The process of decausativisation.

As is shown in section 3.5, it was possible in Old Chinese (1000 BC-AD 200) to use most of the directional verbs either to describe self-agentive motion or as causatives to describe caused motion. Two examples that contrast the non-causative and causative uses of the verb *jìn* 進 ‘move.forward’ are shown in (1) below. These examples are repeated from chapter 3.

(1) **Contrast of non-causative and causative use of *jìn*.**

a.	郤	克	趨	進	曰...
	xì	kè	qū	jìn	yuē...
	Xi	Ke	patter.quickly	go.forward	say...

‘Xi Ke rushed forward and said...’

(*Zuǒzhuàn* 左傳, *Chéng Gōng 3rd year* 成公三年, p. 815, ca. 475 BC)

- a. ...乃 進 兵 擊 秦 嘉。
 ...nǎi jìn bīng jī qín jiā.
 ...then move.forward troops attack Qin Jia.
 ‘...then [he] moved his troops forward to attack Qin Jia.’
 (*Shǐjì* 史記, 7.9, ca. 91 BC)

In the early Middle Chinese period, however, this causative/non-causative alternation was in decline (Mei [1991]2000; Li and Thompson 1976). Instead, there was an increasing tendency from the end of the Old Chinese period onwards for verbs that previously took part in the causative/non-causative alternation to appear in constructs produced by the contiguous serial verb construction (Norman 1988:129 comments on this, although he describes it in different terms). This may have been motivated by the tendency towards disyllabification, discussed in section 4.2.2. The collocations that appeared with this construction became increasingly lexicalised. This meant that there were alternative disyllabic forms originally created within the contiguous serial verb construction for the expression of causative and non-causative meanings, whereas previously the same monosyllabic form would have been used with derivation. For example, in Old Chinese *miè* 滅 is attested as meaning either ‘wipe out’ or ‘be wiped out’. At this time there are also disyllabic expressions like *huǐmiè* 毀滅 ‘destroy and wipe out’ and *mièwáng* ‘be wiped out and disappear’. In Old Chinese, however, *miè* is more common on its own than in compounds. In the *Zuǒzhuàn*, *miè* occurs 136 times and it only appears in a recognisable compound once. In the *Shǐjì*, *miè* occurs alone 355 times and it only appears in recognisable compounds 10 times. By the Early Mandarin period, however, *miè* is only ever used in compounds.

In Middle Chinese periphrastic causative constructions also became quite common. There were periphrastic causative constructions in Old Chinese, but these were limited to a closed class of causative verbs, like *shǐ* 使 ‘send’, *líng* 令 ‘command’, *zhù* 助 ‘help’ and *wèi* 謂 ‘call’ (Pulleyblank 1995:40-42). Some examples of these uses are shown in (2) below. The two verbs *shǐ* and *líng* were often used with slightly bleached senses. The bleached sense of *shǐ* can be seen in (2c) below.

(2) **Periphrastic causatives in Old Chinese.**

- a. 令 苟 有 怨 於 夫人 者 報 之。
 líng gǒu yǒu yuàn yú fūrén zhě bào zhī.
command if have resentment PREP lady NOM repay 3s.
 ‘[He] ordered all who had any grudge against the lady to repay it.’
 (*Zuǒzhuàn* 左傳, *Yuān Gōng* 26th year 哀公二十六年, p. 1728, ca. 475 BC)

- b. 予 助 苗 長 矣。
 yǔ zhù miáo zhǎng yǐ.
 1.s help sprout grow PART.

‘I have been helping the sprouts to grow.’

(*Mèngzǐ* 孟子, ca. 500 BC, quoted in Pulleyblank 1995:41)

- c. 是 使 民 養 生 喪 死 無 憾 也。
 shì shǐ mǐn yǎng shēng sāng sǐ wú hàn yě.
 this make people nourish living mourn dead not.have regret PART.

‘This is to let the people nourish the living and mourn the dead without regrets.’

(*Mèngzǐ* 孟子, ca. 500 BC, quoted in Pulleyblank 1995:41)

In the Middle Chinese period the number of collocations available in the periphrastic causative construction was enlarged through analogy. That is, other verbs came to act as the causative verbs in this structure. It was also common for the second verb in this structure to describe a resulting event or state. This generated a conversational implicature that there was a cause and result relationship between the two verbs in this construction. Some examples of this construction with a cause and result interpretation from the Middle Chinese period are shown in (3) below.

(3) **Extended periphrastic causatives in Middle Chinese.**

- 喚 江郎 覺！
 huàn jiāngláng jué!
 call Jianglang wake!

‘Call Jianglang awake!’

(*世說新語 Shìshuōxīnyǔ, Jiǎjué no. 27 假譎第二十七*, p. 725, ca. AD 420-444)

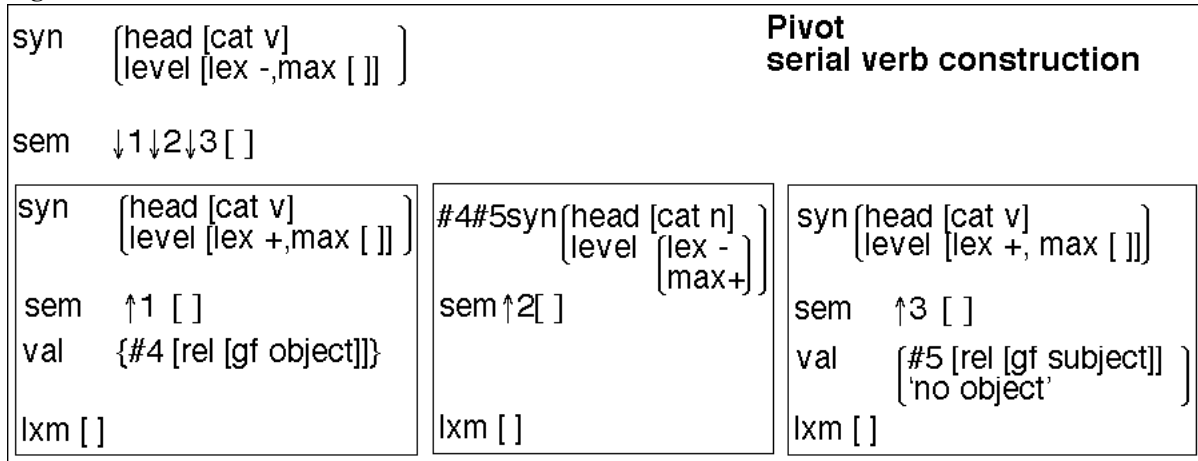
- 今 當 打 汝 前 兩 齒 折。
 jīn dāng dǎ rǔ qián liǎng chǐ zhé.
 now should beat 2.s front two tooth break.

‘Now [I] should beat your front two teeth broken.’

(*Xiányùjīng* 賢愚經, quoted in Ohta [1958]1987:197)

The construction that creates the structure shown in (3) in Middle Chinese is what I will call the pivot serial verb construction. This construction takes two verbs, a transitive verb and an intransitive verb, and arranges their argument structures so that the object of the first verb is understood to be the subject of the second verb. The noun phrase that realises the object of the first verb and the subject of the second verb appears between the two verbs. This construction has been identified by many linguists previously. Mei ([1991]2000) and Shimura ([1967]1995) both call it the *gékāishì* 隔開式 ‘separable form’, while Shi (2002) calls it the ‘separable resultative construction’. A box diagram of the construction is shown in figure 4.1 below.

Figure 4.1 Pivot serial verb construction.



The pivot serial verb construction specifies a complex syntactic structure, stipulating the position in the clause of two verbs and the noun phrase that realises the argument they share. This order is indicated by the order from left to right of the child construction boxes within the parent construction box. The noun phrase that appears between the two verbs is linked as the object of the first verb and the subject of the second verb. This is explicitly indicated by the agreement indices #5 and #6. The first verb must be transitive, since it has an object (the sole argument of an intransitive verb will always be realised as subject in Old Chinese — see section 1.2.1). The second verb must be intransitive, since it is prohibited from having an object by the informal attribute ‘no object’. The semantic attributes of the child constructions are integrated into the parent construction, as is indicated by the integration arrows. The attributes of the external syntax feature of the parent construction indicate that it is a phrasal construction with a verbal head *cat v*, *lex -*, and that it can be further expanded but does not have to be *max []*. The construction is not a maximal projection because it is still able to modify with verb phrase adjuncts and other adjuncts at higher levels of the clause.¹

Note that the linking of arguments in this construction is described in terms of the grammatical functions *subject* and *object*, not in terms of DA + and DA - (distinguished argument + and -). The reason for this is that this construction is a syntactic construction and so operates at the phrase level, which the earlier constructions that refer to DA + and DA - are morphological constructions that operate at the word level. Compare this with the treatment of arguments in the split construction in figure 2.10 in chapter 2.

Li and Thompson (1976:481) show that as the number of compound causative constructs produced by the contiguous serial verb construction and the number of periphrastic causative constructs produced by the pivot serial verb construction increased in the Middle Chinese period, the number of morphologically derived causatives declined. Later the periphrastic causatives also declined and the

¹ Note that I have not made explicit reference to which of the two child verb constructions is the head of the pivot serial verb construction shown in figure 4.1. This is because as a serial verb construction, both verbs that appear in it are heads. Compare this to the description of the contiguous serial verb construction in figure 3.2.

compound causatives became the most common. There is therefore a definite trend in the history of the Chinese language away from morphologically derived causatives and towards compound and periphrastic causatives, which has subsequently moved in favour of compound causatives alone.²

The general loss of the causative/non-causative derivation in verbs is perhaps one factor that influenced the reanalysis of the structures produced in Old Chinese where a theme appeared after a verb and before a directional form (VTD) and where a theme appeared after both a verb and directional form (VDT). It will be remembered from sections 3.2 and 3.3 that these two structures were associated with self-agentive and caused motion respectively in Old Chinese. In Modern Mandarin, however, as pointed out in section 2.2, the difference in meaning between these two structures is much less clear, but is probably related to aspect. The general loss of the causative/non-causative distinction in verbs may have aided this reanalysis, although other factors probably also played a role. These other factors are discussed in section 4.2.2 below.

4.2.2. The tendency towards disyllabification.

The ‘tendency towards disyllabification’ is the name I have given to the tendency for words in Modern Mandarin and other Chinese dialects to be two syllables long.³ This tendency has resulted in a state of affairs in Modern Mandarin where about eighty percent of the vocabulary is disyllabic (Shi 2002:71). The tendency towards disyllabification is foremost a diachronic process which has caused the number of disyllabic words in the language to increase over time. In Old Chinese, most words were only monosyllabic, but in Modern Mandarin disyllabic words are in the majority.

As a diachronic process, the tendency towards disyllabification can be seen to be operating from pre-Qin times up to the present. However, the process seems to have been at its most productive during the late Middle Chinese period. Shi (2002:75-76) shows the key period for the tendency towards disyllabification with Kallgren’s (1958) and his own survey of disyllabic words in texts from earlier varieties of Chinese. Their method is to select some disyllabic words that appear in the Early Mandarin text *Zhūzǐ yǔlèi* 朱子語類 (AD 1270) and which still exist in Modern Mandarin and go back through the historical record to see when these words entered into the language. Shi selects 124 verbs and

² Note that Li and Thompson (1976:484) attribute this trend to a diachronic shift in basic word order from SVO to SOV. The notion that the basic word order of Modern Mandarin is now SOV and has shifted from SVO has little support today. A more plausible explanation for this development is the influence of the tendency towards disyllabification, which are discussed in section 4.2.2.

³ Feng (1997) has attempted to cast the tendency towards disyllabification within the framework of Optimality Theory, claiming that there is a constraint in the language that specifies that the optimal length of a metric foot is two syllables and that this determines the optimal length of a prosodic word. Feng’s argument is useful in attempting to provide theoretical backing for the traditional observation that words in Chinese tend to be disyllabic, but I will not put too much emphasis on it since I do not want to have to take on an additional layer of analysis using Optimality Theory.

checks earlier texts to identify when the words entered the language. Kallgren select 163 words from several classes, not only verbs, and checks concordances and dictionaries of earlier varieties of Chinese to see when the words entered the language. Shi's results are shown in table 4.1 and Kallgren's in table 4.2 below.

Table 4.1. First appearance of disyllabic verbs according to Shi.

period	compounds	percentages
before 5th century	7	6%
5th-8th century	42	34%
8th-12th century	75	60%

From the data in table 4.1 it appears that most of the disyllabic verbs that survive into the modern language entered the language in the period from the fifth century to the twelfth century. Altogether 94% of the verbs tested in this survey appeared in the language in this period. It can also be seen from these data that the production of disyllabic forms increased exponentially during this period. The number of new forms produced in the period from the eighth century to the twelfth century is almost double the number produced from the fifth century to the eighth.

Table 4.2. First appearance of disyllabic words according to Kallgren.

	before AD 600	600-900	900-1200	after 1200	unidentifiable
number of words	10	43	45	23	42

Kallgren's data in table 4.2 show a similar trend. The appearance of disyllabic forms is at its height in the period 600-1200, after which it drops off slightly. Kallgren's data do not show exponential growth, however. The rise in the number of forms seems to be consistent between the two sampling periods between 600 and 1200.

The tendency towards disyllabification probably arose as a compensatory measure for the simplification of the phonological system of the language (Shi 2002:72-73). Because of this process of simplification, many monosyllabic morphemes in earlier varieties of Chinese have become homophones in modern varieties. For example, the morphemes *shī* 師, *shī* 詩 and *shī* 失 are all homophonous in Modern Mandarin, while in Middle Chinese they would have each had their own distinctive pronunciations, /ʃi/, /ci~ci/ and /cit/ respectively (Pulleyblank 1991:281-282).⁴ The tendency towards disyllabification operates to counteract this levelling of distinctions between words to prevent the language from having too much homophony by building words that are two syllables long. Two syllable words are twice the length of one syllable words and so can have twice the number of distinctions in phonological form than one syllable words.

⁴ Pulleyblank does not say what the tilde (~) in the transcription /ci~ci/ represents. It probably means that the pronunciation could be reconstructed either as /ci/ or /ci/.

The hypothesis that the simplification of the phonological system of the language drives the process of disyllabification is supported by contemporary dialect evidence. Dialects that retain more complex phonological systems, with more tones and more complex syllable structure, generally have fewer disyllabic compound words than dialects with simpler phonological systems. For example, the southern dialect Cantonese has a much more complicated phonological system than any of the Northern dialects, with six phonemic tones and a greater variety of syllable codas, like *-p*, *-t*, *-k* and *-m*. It also has a smaller proportion of disyllabic words than any Northern variety and lacks the nominalising suffixes *-zi* 子 and *-er* 兒, whose function in Northern dialects is to expand a monosyllabic nominal morpheme to two syllables so that it can serve as a disyllabic word in the clause (Zhan and Gan 2002:189).

In the late Middle Chinese period the tendency towards disyllabification appears to be the main factor that determines the structure of directional constructs. It serves to bind the class two directional forms to their preceding verbs. The class two directional constructs are monosyllabic units and so are the verbs they unify with. Alone these constructs do not satisfy the requirements of the tendency towards disyllabification, but together they form single prosodic words that are two syllables long. The class one forms are immune from the effects of the tendency towards disyllabification, however. Why this should be the case is discussed below.

The influence of the tendency towards disyllabification creates a situation where the class two forms are always bound to their host verbs while the class one forms may be either free or bound. This distribution of directional forms is identical to the distribution of directional particles observable in Modern Mandarin. This distribution first appears in the texts in the *Dūnhuángbiànwén* 敦煌變文 collection (Five Dynasties period, AD 907-1127), as can be seen in (4) below.⁵

(4) **Bound class two directional form in Middle Chinese.**

- a. 語 訖， 遂 飛 上 天。
 yǔ qì, suì fēi shàng tiān.
 speak finish, thereupon fly up heaven.

‘He finished speaking and then flew up to heaven.’

(*Dūnhuángbiànwén* 敦煌變文, p. 380, Five Dynasties period AD 907-1127)

⁵ Note that in (4b) *què* 卻 ‘off’ appears to be a phase complement verb roughly equivalent to Modern Mandarin *diào* 掉 ‘drop’. In this clause it reinforces the notion that ownership of the child was relinquished through the act of selling, much as *qù* 去 ‘away’ does. The possibility of the directional particles appearing alongside phase complements in the language of this period is discussed further in section 5.3.

Free class one directional form in Middle Chinese.

b.	阿爺	賣	卻	孩兒	去...
	āyé	mài	què	háir	qù...
	uncle	sell	off	child	away...

‘The uncle sold off the child...’

(*Dūnhuángbiànwén* 敦煌變文, p. 384, Five Dynasties period AD 907-1127)

Bound class one directional form in Middle Chinese.

c.	霸王	親	問，	身	穿	金鉀，	搨	去	頭牟。
	bàwáng	qīn	wèn,	shēn	chuān	jīnjiǎ,	jiē	qù	tóumóu.
	hegemon	personally	ask,	body	wear	armour,	remove	away	hat.

‘The hegemon personally asked, on his body he wore armour and he took off his cap.’

(*Dūnhuángbiànwén* 敦煌變文, p. 384, Five Dynasties period AD 907-1127)

It should be noted that despite the fact that the class one and class two directional forms have different syntactic distributions in (4a) and (4c), semantically they clearly belong together in a single category (the semantic attributes of the directional forms in this period are discussed in section 4.3). The class one form is also able to occupy the same syntactic position as the class two form and retain the same meaning that it has when it is in the other position. That is, the meaning of the class one forms in (4b) and (4c) is the same. The class one and class two forms therefore probably belong to the same superordinate syntactic category, even if they belong to separate subgroups within that category.

There is also no clear semantic difference between the class one forms that appear adjacent to the verb and those that are separated from the verb by an object, as in (4b) and (4c). In both cases the main verb is transitive and takes an affected object and the directional form describes a path associated with the event described by the main verb. In Old Chinese we would expect the directional form to appear before the object in both of these examples, since the object is a theme that is understood to have been caused to move in a particular direction (see section 3.3). It seems that in the late Middle Chinese period the causative/non-causative distinction formerly encoded by the bound and separate structures had been lost.

There are several possible reasons for the loss of the causative/non-causative distinction in the alternation between bound and separate forms. One is that it is part of the general process of decausativisation that was occurring in the language of the time, as shown in section 4.2.1. Another possibility is that the class one directional forms, which were the only directional forms that could still take part in the bound/separate alternation, had been grammaticalised to the point that considerations of causativity were irrelevant. It seems that the class one directional forms in late Middle Chinese had already been grammaticalised to the point where they no longer had independent argument structures, a feature that the class two particles still retained at this time and indeed still retain in Modern Mandarin.

For example, in (4a) above the class two directional particle *shàng* 上 ‘up’ adds the location argument *tiān* 天 ‘heaven’ to the verb *fēi* 飛 ‘fly’. The class one forms are not attested introducing an argument in this way from the late Middle Chinese period onwards. If the class one forms were grammaticalised to the point that they had no argument structures of their own then they would not have been able to take affected object arguments either and the original causative/non-causative distinction would be irrelevant.

The argument that it was the tendency towards disyllabification that caused the class two directional forms to be bound to the verb in the Middle Chinese period is supported by the fact that in Modern Mandarin the class two directional particles and their corresponding verbs rarely appear alone. They are almost always bound into disyllabic compounds with another verbal morpheme or an aspect marker or a monosyllabic noun phrase (for example, 出門 *chū mén* ‘go out the door’). In earlier varieties of Chinese this is not the case, however. As we look further back in time at texts from earlier varieties of Chinese, we can see more instances of class two directional forms that do not appear in disyllabic compounds but occur on their own.

Table 4.3 presents a count of the proportion of tokens of class two directional forms that appear adjacent to verbal morphemes in historical texts. The numbers in parentheses represent the number of tokens found in the texts. The number before the colon is the number of tokens adjacent to verbal morphemes and the number after the number of tokens that are not adjacent. The following percentage indicates what percentage of the total number of tokens are adjacent to verbal morphemes. For example, (2:25) 7% in the column for *chū* 出 in the row for the text the *Shìshuōxīnyǔ* indicates that there were two tokens of *chū* adjacent to verbal morphemes and 27 tokens not adjacent to verbal morphemes and that the number of adjacent tokens is 7% of the total number of tokens.

In this survey I have only counted as bound directional forms those that appear next to verbal morphemes. Although in Modern Mandarin a class two directional form and a monosyllabic noun phrases can together constitute a disyllabic compound, as was shown above, in early varieties of Chinese, when the tendency towards disyllabification was not so strong, many words were still monosyllabic, and so every collocation of a monosyllabic directional form with a monosyllabic object noun phrase looks like a modern verb-object compound. Disyllabic verb compounds were much rarer in the earlier varieties of the language, however, and so provide a better indicator of the tendency towards disyllabification. I have also counted all directional forms, both verbs and particles, together, since in earlier varieties of Chinese it is often difficult to draw a line between the two. Even in Modern Mandarin it is sometimes unclear whether a form is a directional particle or a directional verb.

Table 4.3. Proportion of class two directional forms in compounds.

text	出	入	進	上	下	過	開	起	回	還	歸	total
	<i>chū</i>	<i>rù</i>	<i>jìn</i>	<i>shàng</i>	<i>xià</i>	<i>guò</i>	<i>kāi</i>	<i>qǐ</i>	<i>huí</i>	<i>huán</i>	<i>guī</i>	
<i>Shishuōxīnyǔ</i> 世說新語 (ca. AD 420-440)	(2:25) 7%	(0:15) 0%	(1:8) 11%	(3:1) 75%	(2:10) 17%	(2:23) 8%	(3:6) 33%	(1:11) 8%	(0:4) 0%	(0:17) 0%	(0:10) 0%	10%
<i>Bǎiyùyīng</i> 百 喻經 (ca. AD 483-494)	(5:20) 20%	(0:24) 0%	(0:6) 0%	(0:6) 0%	(0:1) 0%	(5:8) 39%	(0:1) 0%	(0:3) 0%	(0:1) 0%	(1:12) 14%	(0:7) 0%	12%
<i>Zhūzǐyǔlèi</i> 朱 子語類 (AD 1270)	(12:21) 36%	(3:3) 50%	(3:5) 38%	(19:4) 83%	(12:5) 71%	(10:28) 26%	(8:3) 73%	(3:5) 38%	(0:0) none	(0:1) 0%	(0:1) 22%	44%
<i>Piáotōngshì yánjiě and Lǎoqìdà yánjiě</i> 朴通事 諺解老乞大 諺解 (ca. AD 1400)	(18:9) 67%	(7:1) 88%	(2:0) 100%	(9:8) 53%	(29:2) 94%	(14:6) 70%	(3:4) 43%	(21:0) 100%	(17:2) 90%	(5:6) 46%	(0:0) 0%	77%
<i>Rùlínwàishǐ</i> 儒林外史 (early 18th century)	(49:14) 78%	(1:2) 33%	(90:27) 77%	(37:13) 74%	(25:13) 66%	(36:19) 65%	(5:13) 28%	(33:12) 73%	(30:8) 79%	(2:6) 25%	(0:4) 100%	70%
Lancaster Corpus	(72:4) 95%	(14:1) 93%	(22:3) 88%	(24:7) 77%	(34:1) 97%	(29:3) 91%	(33:2) 94%	(30:2) 94%	(16:1) 94%	(9:0) 100%	(16:3) 84%	92%

From the data shown in the table above it can be seen that there is a great deal of variability among texts in whether individual class two morphemes must be bound or can be free. It can be seen, however, that in the early Middle Chinese period there is a very low rate of around 10% of the class two forms appearing in compounds with verbs, which increases in the early stages of the Early Mandarin period (AD 1000-1900) to around 40% and continues to increase to around 70% and then reaches a rate around 90% in Modern Mandarin. This overall trend indicates a growing preference for the class two directional forms to be bound into disyllabic compounds with verbs.⁶

⁶ Note that samples of equal length were taken from each of the texts to calculate the proportions shown in table 4.3 to ensure the proportions reported are directly comparable. The sample size was set at the length of the shortest text, the *Piáotōngshì yánjiě and Lǎoqìdà yánjiě*, which is 2,622 clauses long. The small sample size has caused some erratic results. For example, many of the class two forms rise to a peak of bondedness in the *Piáotōngshì yánjiě and Lǎoqìdà yánjiě* and then become much freer in the later text *Rùlínwàishǐ*. This is an unavoidable side effect of a small data sample. The general trend of increasing bondedness over time is still observable in the data, however.

Because of the influence of the tendency towards disyllabification, a structure where a class two directional form appears after an object and so separate from its host verb (VOD_{class 2}) would be greatly dispreferred (although sometimes this structure could occur in late Middle Chinese; see section 5.3). This is probably why the class two forms developed the distribution they have in Modern Mandarin, where they can only appear directly following the verb and not separate from it.

The question remains why the class one directional particles were immune from the effects of the tendency towards disyllabification, being able to appear either immediately following the verb, as in (4b), or separate from the verb, as in (4c). The most probable explanation is that the high degree of grammaticalisation of the class one particles makes them immune. As was pointed out above, the class one particles had already lost their independent argument structures by this stage, unlike the class two particles. This indicates their higher degree of grammaticalisation. Many of the grammatical morphemes of Modern Mandarin are immune from the tendency towards disyllabification and so are able to form prosodic words in their own right even though they are not two syllables long. Most prepositions exhibit this behaviour, eg *gěi* 给 ‘to, for’, *zài* 在 ‘at’, as does the disposal marker, *bǎ* 把, and adverbs like *yòu* 又 ‘again’ and *dōu* 都 ‘all’.

To tie the discussion of the tendency towards disyllabification presented here into the Construction Grammar representation developed so far, it could be said that in the Middle Chinese period the first lexical constructions with the phonological attribute *pros.word* (prosodic word; discussed in section 2.2) were created. The creation of this attribute was triggered by the tendency towards disyllabification. The syntactic constructions created during this time to produce directional constructs were the first to be sensitive to this attribute and were not sensitive to issues of causativity, as the syntactic constructions in Old Chinese had been (discussed in chapter 3).

The tendency towards disyllabification is also noted by many scholars studying the development of the resultative and phase constructions as a major factor in their development. Both Shimura ([1967]1995) and Shi (2002) claim that it was the tendency towards disyllabification that caused the main verb and resultative verb that appeared in the pivot serial verb construction in Middle Chinese (as discussed in section 4.2.1) to become bound together, producing the modern resultative and phase constructions. They disagree on precisely how this occurred, however. Shimura believes that lexicalised compounds with an action-result semantic structure that could take an object provided the template for other resultative collocations to be created by analogy. Shi believes, on the other hand, that compounds were created in instances where there was no overt object and that these compounds were later generalised to be able to take objects.

4.3. The semantic reanalyses of the directional forms.

Changes in the meaning expressed by directional forms in the postverbal position also give clues to their grammaticalisation as directional particles. This section examines the changes in the meaning of the directional forms over time that can be seen in the corpus.

The primary semantic difference between the modern directional particles and their corresponding directional verbs is that a directional particle describes a single event with the verb it attaches to, while a directional verb can describe a separate event, although it does not have to (cf. the discussion in section 1.1 for the status of the particles in Modern Mandarin and in section 3.3 for the status of directional verbs in Old Chinese). Losing the ability to describe a separate event is a major stage in the development of the directional particle constructions. Precisely when this occurred is difficult to say. In Old Chinese (1000 BC-AD 200) there are many examples of constructs involving directional forms that could either be interpreted as one event or multiple events. For example, in (5a) there seems to be more than one event described by the clause. The actor first raises the troops *and then* goes into Junan. In (5b), on the other hand, the two verbs together seem to describe a single event, running into the city. Example (5b) is repeated from (1a) in chapter 3.

(5) Old Chinese construct involving a directional form that describes multiple events.

- a. ...乃 起 四 邑 之 兵 入 距難...
...nǎi qǐ sì yì zhī bīng rù jùnán...
...then raise four village POS soldier move.in Junan...
'...then he raised the troops from the four villages and went into Junan...'
(*Shǐjì* 史記, 43.68, ca. 91 BC)

Old Chinese construct involving a directional form that describes a single event.

- b. 張 耳 與 趙 王 歇 走 入 鉅鹿 城...
zhāng ěr yǔ zhào wáng xiē zǒu rù jùlù chéng...
Zhang Er with Zhao king stop flee move.in Julu city...
'Zhang Er and the king of Zhao stopped and ran into Julu city...'
(*Shǐjì* 史記, 89.14, ca. 91 BC)

In other constructs it is much less clear whether the directional forms describe single event with the verb or separate events. An understanding of (6) below either as a single complex event or as two separate events could be defended. As a single event, the sentence would mean 'he took it away', but as two events it would mean 'he took it and left'.

(6) **Old Chinese construct ambiguous between single event and multiple event interpretation.**

...誤	持	同	舍	郎	金	去...
...wù	<u>chí</u>	tóng	shè	láng	jīn	<u>qù</u> ...
...mistakenly	<u>carry</u>	same	dormitory	official	gold	<u>leave</u> ...

‘...he mistakenly took his roommate’s gold away...’
 (*Shǐjì* 史記, 103.14, ca. 91 BC)

Ultimately, decisions about whether a particular construct describes a single event or multiple events depend on the sprachgefühl of a native speaker. Since there are no native speakers of these earlier varieties of Chinese to ask, we cannot put a precise date on the directional particles’ loss of the ability to describe separate events. There are still many ambiguous constructs in the Middle Chinese period and Early Mandarin period, as can be seen in (7) below.

(7) **Early Middle Chinese constructs that are ambiguous between single event and multiple event interpretations.**

- a. ...走 入 草 中。
 ...zǒu rù cǎo zhōng.
 ...run in grass among.
 ‘...and he ran into the grass.’
 (*Bǎiyùjīng* 百喻經, *Wèi èzèi suǒjiéshī dié yù* 為惡賊所劫失疊喻, p. 181, ca. AD 483-494)
- b. 持 來 歸 家...
chí lái guī jiā...
carry hither return home...
 ‘He carried it home...’
 (*Bǎiyùjīng* 百喻經, *Cháng ānpólúguǒ yù* 嚙菴婆羅果喻, p. 135, ca. AD 483-494)
- c. 忽然 十字地 裂， 涌 出 一 人。
 hūrán shízi-dì liè, yǒng chū yì rén.
 suddenly cross-shaped-ADV split, spew out one person.
 ‘Suddenly it split in the shape of a cross and spewed out a man.’
 (*Dūnhuángbiànwén* 敦煌變文, p. 386, Five Dynasties period AD 907-1127)

One semantic attribute that can be used to objectively test the degree of grammaticalisation of the directional forms is the loss of independent argument structure. As was shown in section 4.2.2 above, the class one directional forms had already lost the ability to introduce arguments to the predicate in the late Middle Chinese period (approximately AD 700-900). We can therefore be fairly certain that the class one directional forms that are attested in late Middle Chinese are already well advanced in their grammaticalisation from directional verbs to directional particles.

As the directional forms became further grammaticalised they took on extended metaphorical meanings. In fact, some of the directional forms had already started to acquire metaphorical senses in

Old Chinese, before grammaticalisation had taken hold. A good example is *qù* 去, which often had the metaphorical sense ‘get rid of’, derived from the causative basic spatial sense ‘make something go away’.⁷ This sense can be considered metaphorical because it does not necessarily imply physical movement. Rather, it simply asserts that the theme was dispensed with. Some examples of this metaphorical sense is shown in (8) below. (8a) is a construct from Old Chinese, showing that *qù* had the sense of ‘get rid of’ even before it was grammaticalised to a particle. (8b) is a construct from the early Middle Chinese period where *qù* continues to have the sense ‘get rid of’. (8a) is repeated from (6b) in chapter 3.

- (8) a. 盡 除 去 先 帝 之 故 臣...
 jìn chú qù xiān dì zhī gù chén...
 completely remove get.rid.of former emperor POS original vassal...
 ‘[He] completely replaced the former emperor’s original vassals...’
 (*Shǐjì* 史記, 87.24, ca. 91 BC)
- b. ...開 卷 一 尺 許 便 放 去...
 ...kāi juǎn yì chǐ xǔ biàn fàng qù...
 ...open scroll one foot approximately then put thither...
 ‘...he opened the scroll about an foot and then put it aside...’
 (*Shìshuōxīnyǔ*, *Wénxué* no. 4 文學第四, p. 149, ca. AD 420-444)

Later *qù* came to take on other metaphorical meanings, such as indicating transfer of ownership, from a metaphor that conceptualises ownership as spatial proximity. This sense is shown in the construct in (9) below.

(9) **Metaphorical use of *qù* indicating transfer of ownership.**

- ...或 語 令 賣 去。
 ...huò yǔ lìng mài qù.
 ...someone tell urge sell thither.
 ‘...someone told him and urged him to sell it off.’
 (*Shìshuōxīnyǔ* 世說新語, *Déxíng* no. 1 德行第一, p. 23, ca. AD 420-444)

Xià 下 also exhibited a metaphorical sense in Old Chinese. In (10) below is an example where this verb does not describe a literal path but a metaphorical path.

⁷ Note that the non-causative sense of *qù* has changed since the Old Chinese period. In Old Chinese the DA - argument of *qù* was a source, but in Modern Mandarin it is a goal. For example, if an Old Chinese speaker said ‘*qù chǔ* 去楚’, they would mean ‘leave Chu’. The same utterance by a speaker of Modern Mandarin would mean ‘go to Chu’ (Note too that a Modern Mandarin speaker would use a disyllabic form *Chǔguó* 楚國 to refer to Chu). The change in DA - argument probably occurred in the early Middle Chinese period (Yang 1992:248-255).

(10) **Metaphorical use of xià.**

攻	下	邑，	拔	之。
<u>gōng</u>	<u>xià</u>	yì,	bá	zhī.
<u>attack</u>	<u>lower</u>	city,	pull.out	3.s.

‘They attacked the city and razed it.’

(*Shǐjì* 史記, 8.20, ca. 91 BC)

By the end of the Middle Chinese period and the beginning of the Modern Mandarin period (around AD 600-1000) the first metaphorical senses that in Modern Mandarin are attached only to directional particles begin to appear. In the *Zhūzǐyǔlèi* many metaphors that are still current in Modern Mandarin can be found. Among these are the use of *qù* 去 and *qǐ* 起 to indicate continuative and inchoative/inceptive aspect (these functions have been taken over by the combined particles *xiàqù* 下去 and *qǐlái* 起來 in Modern Mandarin; see section 2.3). In the *Zhūzǐyǔlèi*, *qǐ* 起 seems to be in variation with the combined particle form *qǐlái* 起來, as can be seen in (11b) and (11c) below.

(11) ***Qù* as marker of continuative aspect.**

a.	...漸漸	懶	去...
	...jiànjiàn	<u>lǎn</u>	<u>qù</u> ...
	...gradually	<u>lazy</u>	<u>CONT</u>

‘...they gradually get lazier...’

(*Zhūzǐ yǔlèi* 朱子語類, p. 59, AD 1270)

***Qǐ* as marker of inchoative aspect.**

b.	...從	細	處	做	起...
	...cóng	xì	chù	<u>zuò</u>	<u>qǐ</u> ...
	...from	slim	place	<u>do</u>	<u>INCH</u> ...

‘...if you start from this simple place...’

(*Zhūzǐ yǔlèi* 朱子語類, p. 42, AD 1270)

***Qǐlái* as marker of inchoative aspect.**

c.	...卻	忽然	說	起來。
	...què	hūrán	<u>shuō</u>	<u>qǐlái</u> .
	...but	suddenly	<u>speak</u>	<u>INCH</u> .

‘...but then he suddenly started speaking.’

(*Zhūzǐ yǔlèi* 朱子語類, p. 27, AD 1270)

Many other extended metaphorical senses attached to directional forms were current at this time, such as the metaphors ‘to be outside is to be known’ and ‘to be outside is to be produced’ carried by the directional forms *chū* 出 and *chūlái* 出來. These are shown in (12) below.

(12) *Chūlái* as instance of metaphor ‘to be outside is to be known’.

- a. 所以 程 發明 道理 出來， 非 一 人 之 力 也。
suǒyǐ Chéng fā míng dào lǐ chū lái, fēi yì rén zhī lì yě.
so Cheng discover sense out-hither, not.be one person POS strength PART.
‘So Cheng finding out the sense of it was not one person’s work.’
(*Zhūzǐ yǔlèi* 朱子語類, p. 274, AD 1270)

Chū as instance of metaphor ‘to be outside is to be produced’.

- b. ...如何 通得 許多 事情， 做 出 許多 事業？
...rúhé tōng dé xǔ duō shì qíng, zuò chū xǔ duō shì yè?
...how understand many matter, do out many work?
‘...how do you understand many matters and accomplish many things?’
(*Zhūzǐ yǔlèi* 朱子語類, p. 264, AD 1270)

Chūlái as instance of metaphor ‘to be outside is to be produced’.

- c. ...做 詩 出來...
...zuò shī chū lái...
...do poem out-hither...
‘...produce a poem...’
(*Zhūzǐ yǔlèi* 朱子語類, p. 273, AD 1270)

It seems that the directional forms attested in the transitional period between Middle Chinese and Early Mandarin already had many of the features that define directional particles in Modern Mandarin. The class one forms have no independent argument structures, and many of the metaphorical senses that in Modern Mandarin are associated with directional particles and not directional verbs had started to appear. We can therefore probably say that in the late Middle Chinese period and Early Mandarin period the first directional particle constructions had already started to emerge.

The only major change in the particles that has occurred between this time and the present is a small degree of lexical replacement in some forms. The directional particle *guī* 歸 ‘return’, and its variants *huán* 還 ‘return’ and *zhuǎn* 轉 ‘turn back’, passed out of use as productive directional particles some time between the thirteenth century and the fifteenth century, and were replaced by the particle *huí* 回 ‘return’, which is the only particle that appears in this sense in Modern Mandarin. The particle *rù* 入 ‘in’ was replaced by *jìn* 進 ‘in’ some time after the eighteenth century. Apart from these changes all the directional particles that appear in Modern Mandarin are attested at this time, as can be seen from table 4.4, which provides a frequency count of the directional particles attested in the late Middle Chinese text *Dūnhuángbiànwén* and the Early Mandarin text *Zhūzǐ yǔlèi*. The data in the table are drawn from Wu (1996:391) and Wu (2003:262-271).

Table 4.4. Directional particles in late Middle Chinese and Early Mandarin.

particle	<i>Dānhuángbiànwén</i> 敦煌變文	<i>Zhūzǐ yǔlèi</i> 朱子語類
<i>shàng</i> 上	22	5
<i>xià</i> 下	28	31
<i>chū</i> 出	92	72
<i>rù</i> 入	30	12
<i>qǐ</i> 起	10	28
<i>guò</i> 過	11	29
<i>zhì</i> 至	0	6
<i>dào</i> 到	0	51
<i>kāi</i> 開	3	24
<i>huí</i> 回	3	3
<i>guī</i> 歸	7	4
<i>zhuǎn</i> 轉	0	3
<i>lái</i> 來	285	88
<i>qù</i> 去	49	124

Zhì 至 ‘arrive’ has also been superseded by *dào* 到 as a lexical item. As is shown in section 2.4 *dào* is not clearly a member of the class of directional particles. It occupies an intermediate position between the different classes of constructions that follow the verb.

4.4. Conclusion.

Forms recognisable as products of constructions like the Modern Mandarin directional constructions first appeared at the end of the Middle Chinese period and the beginning of the Early Mandarin period. The new directional constructions of this time were created by the reanalysis of the constructs originally produced by the directional verb, verb co-ordination and verb serialisation constructions of Old Chinese.

The modern distribution of the directional forms was established in the late Middle Chinese period under the influence of the tendency towards disyllabification. This tendency served to bind the class two forms to their preceding verbs to make disyllabic compounds. The class one directional particles were immune from this constraint, however, because they were more highly grammaticalised. At this time the class one forms could be either bound or separate. The distinction encoded by the bound and separate forms in late Middle Chinese is no longer one of whether the forms are acting causatively or not. This probably has to do with the general process of decausativisation that was

occurring in the language at the time, but may also be because the class one forms had been grammaticalised to the point where they no longer had independent argument structures, so issues of causativity were irrelevant. The difference in meaning between the separable and inseparable forms was reanalysed as being one not of causativity, but some other feature, such as aspect. The precise distinction in the language of the time is not clear from the diachronic data available, just as the distinction marked in Modern Mandarin is not clear.

The semantic development of the directional particles progressed alongside their syntactic development. At some point the directional forms in postverbal position lost the ability to describe separate motion events and came to describe only paths for the preceding verb. However, there is no objective test that can be used to determine whether a particular construct describes one event or two so it is difficult to say when this happened. At the end of the late Middle Chinese period and beginning of the Early Mandarin period, however, there are several clues that indicate constructions like the modern directional particle constructions are operating. The class one forms have lost their independent argument structures and also many metaphorical meanings that are attached only to directional particles in Modern Mandarin appear at this time.

5. The combined and split particle constructions and the potential constructions.

5.1. Introduction.

This chapter looks at the development of the combined and split directional particle constructions and the potential constructions. These constructions appear later after the directional particles have already begun to be grammaticalised. The combined and split particle constructions are discussed in section 5.2 and the potential constructions are discussed in section 5.3.

5.2. The emergence of the combined and split particle constructions.

In Old Chinese (500 BC-AD 200) there are the occasional directional forms that have the appearance of being the products of constructions like the modern combined directional constructions. In the *Shǐjì* 史記, for example, there is one instance of a form that looks like a modern combined directional construction, which is shown in (1) below. This construct has the canonical structure of a modern combined directional construct, a displacement verb followed by a class two directional form, followed by a class one form. This has led Chao (1968:462) to claim that it is the first attested combined directional construct in the language.

(1) **Apparent combined directional construct in Old Chinese.**

...漢	王	遁	出	去...
...Hàn	wáng	dùn	chū	qù...
...Han	king	flee	move.out	leave...

‘...the king of Han fled, went out and ran away...’
(*Shǐjì* 史記, 96.4, ca. 91 BC)

There is actually no evidence to suggest that the form in (1) is a product of anything but the unmarked verb phrase co-ordination construction. We know that the other directional forms that are attested at this time were more like directional verbs than grammaticalised directional particles. There are also no other examples of two directional forms in series after another verb in the entire text of the *Shǐjì*, which is approximately five hundred thousand characters long. This suggests that this construct was not part of a special construction in the language, but simply the chance product of the unmarked verb phrase co-ordination construction.

In the following centuries in the early Middle Chinese period (AD 200-600) there are no attested examples of combined directional forms appearing after any verbs in the clause. However, in the *Shìshuōxīnyǔ* 世說新語 and *Bǎiyùjīng* 百喻經 together there are about seven tokens of forms consisting of a class two directional form followed by a class one directional form. Among these seven tokens are five types, with *chū lái* 出來 occurring three times and the types *chū qù* 出去, *guò qù* 過去, *shàng qù* 上去 and *qǐ qù* 起去 each appearing once. Some of these collocations are demonstrated in (2) below.

(2) **Collocations of class two directional forms and class one directional forms in early Middle Chinese.**

- a. ...然 出 戶 去...
 ...rán chū hù qù...
 ...but move.out door leave...

‘...but when [he] goes out the door...’

(*Shìshuōxīnyǔ* 世說新語, *shǎngyù no. 8* 賞譽第八, p.386, ca. AD 420-444)

- b. ...便 上 車 去。
 ...biàn shàng chē qù.
 ...then move.up chariot leave.

‘...then [he] mounted his chariot and left.’

(*Shìshuōxīnyǔ* 世說新語, *Rèndàn no. 23* 任誕第二十三, p.634, ca. AD 420-444)

- c. 汝 速 出 來...
 rǔ sù chū lái...
 2.s quickly move.out come...

‘If you come out quickly...’

(*Bǎiyùjīng* 百喻經, *Wèi fù mào bí yù* 為婦買鼻喻, p.53, ca. AD 483-494)

- d. 鐘 起 去...
 zhōng qǐ qù...
 Zhong rise.up leave...

‘Zhong got up to leave...’

(*Shìshuōxīnyǔ* 世說新語, *Jiǎn ào no. 24* 簡傲第二十四, p. 639, ca. AD 420-444)

The constructs shown in (2) could have also been produced by the unmarked verb phrase co-ordination construction. It is only in the end of the Middle Chinese period (AD 600-1000) and at the beginning of the Early Mandarin period (AD 1000-1300) that the first examples of what could properly be considered combined directional particles start to appear. Some examples are shown in (3) below.

(3) **Combined directional constructs in late Middle Chinese.**

a.	祖師	一	跳	下	來...
	zǔshī	yí	tiào	xià	lái...
	master	immediately	jump	down	hither...

‘The master immediately jumped down...’

(*Zǔtángjí* 祖堂集, juan 3, *Yí sù jué héshàng* 一宿覺和尚, p. 132, ca. AD 952)

b.	汝	若	把	旗	上	來...
	rǔ	ruò	bǎ	qí	shàng	lái...
	you	if	hold	flag	move.up	come...

‘If you can raise the flag up...’

(*Zǔtángjí* 祖堂集, p. 312, ca. AD 952)

c.	師	便	打	出	去。
	shī	biàn	dǎ	chū	qù.
	master	then	hit	move.out	leave.

‘The master beat him out [of the temple].’

(*Zǔtángjí* 祖堂集, p. 378, ca. AD 952)

It is reasonable to assume that the constructs shown in (3) were produced by combined directional particle constructions similar to those found in Modern Mandarin (discussed in section 2.2.3) since, as was established in chapter 4, the earliest varieties of the directional particle constructions and their associated syntactic constructions had almost certainly developed by the end of the Middle Chinese period. The combined directional forms in the late Middle Chinese period could also carry extended metaphorical meanings that in Modern Mandarin are associated only with directional particles, as is shown in section 4.3.

Examples like that in (3b) suggest that the constructs with two directional particles attested in late Middle Chinese were produced by an early combined directional particle construction rather than a construction like the split directional construction (split constructs appear later, as discussed below). The two verbs in constructs like those in (3) are always bound together with no constituents ever appearing between them.

The combined directional forms always appear after any overtly expressed object, as can be seen in (3b) above. It is not possible to have a verb followed by a combined directional particle followed by an object. Such constructs only appear in the Modern Mandarin period. An example of this type of construct is shown in (4) below, repeated from (7a) in chapter 2.

(4) **Combined directional form in structure verb-directional particle-object.**

他	端上來	了	一	碗	湯。
tā	duān- <u>shang-lai</u>	le	yì	wǎn	tāng.
3.s	serve- <u>up-hither</u>	PERF	one	bowl	soup.

‘He served up a bowl of soup.’

(Lancaster Corpus)

From the evidence presented above it appears that in late Middle Chinese and Early Mandarin the combined directional particles could only appear separate from the verb. In terms of the Construction Grammar description set out so far it could be said that they could unify with the separable directional construction in the language of this time but not with the inseparable construction (these constructions in Modern Mandarin are described in section 2.2).

The combined particle forms were disyllabic units, being made up of two monosyllabic directional particles, and so they would have satisfied the requirements of the tendency towards disyllabification and been able to create prosodic words in their own right. This would allow them to unify with the separable directional construction. It is not clear why the combined forms would be prohibited from unifying with the inseparable construction, however. The most likely explanation is the derive clitic construction was restricted to unifying with only monosyllabic directional particle constructions at this time. We do not know from the evidence available when the clitic-like nature of the directional particle forms that immediately follow the verb emerged, since there is no information about the finer details of the pronunciation of these forms in late Middle Chinese and Early Mandarin available today. It is quite probable, however, that the reduction in pronunciation occurred at the same time or shortly after the forms became bound to the backs of their host verbs, that is, at around the same time that the first versions of the inseparable construction appeared. From the evidence presented in section 4.2.2, it seems that early versions of the inseparable construction were operating in late Middle Chinese. It is therefore very likely that an early version of the derive clitic construction was also operating in the grammar of late Middle Chinese and Early Mandarin.

The derive clitic construction would have unified with only the monosyllabic class one and class two directional particle constructions in the early stages. Somewhere between the late Early Mandarin period and the Modern Mandarin period the combined particle constructions were also attracted towards the clitic construction through analogy with the monosyllabic class one and class two particle constructions. The analogy would have been possible because speakers would have observed the close connection in form and meaning between the individual class one and class two directional particle constructions and the combined particle construction. In terms of the Construction Grammar representation presented in figure 2.4 in chapter 2, the earlier construction would have had the attribute *level* specified in the child construction as *lex +*, *max -*, which would have prevented it from unifying with the combined particle construction (shown in figure 2.9 in chapter 2), since its *max* attribute is

specified as +. The process of analogy would have generated a new construction more like the modern derive clitic construction, where the *level* attribute in the child construction slot is unspecified.

The collocations between class two and class one directional particles within the combined directional constructions seem to be relatively free in the late Middle Chinese period. Table 5.1 below shows the number of tokens of collocations of various combined particles in two late Middle Chinese texts. It is not possible to know whether imaginable collocations, such as *rùqù* 入去 ‘in thither’ would have been ungrammatical or are just unattested.

Table 5.1. Collocations of combined directional constructions in late Middle Chinese.

collocation	<i>Dūnhuángbiànwén</i> 敦煌變文 (ca AD 907-1127)	<i>Zūtángjí</i> 祖堂集 (ca AD 952)
<i>guòqù</i> 過去 ‘over thither’	1	2
<i>guòlái</i> 過來 ‘over hither’	1	1
<i>chūqù</i> 出去 ‘out thither’	1	3
<i>chūlái</i> 出來 ‘out hither’	2	3
<i>huílái</i> 回來 ‘back hither’	1	0
<i>guílái</i> 歸來 ‘back hither’	4	0
<i>rùlái</i> 入來 ‘in hither’	2	0
<i>shànglái</i> 上來 ‘up hither’	0	9
<i>xiàlái</i> 下來 ‘down hither’	0	4
<i>qǐlái</i> 起來 ‘upwards hither’	0	1

Starting with the *Zhūzǐ yǔlèi* 朱子語類 (AD 1270), at the beginning of the Early Mandarin period, split directional particles also appear. Some examples are shown in (5) below.

(5) **Early Mandarin split directional constructs.**

- a. ...卻 趕 出 門 去!
 ...què gǎn chū mén qù!
 ...but hurry exit door thither!

‘...but he hurried out the door!’
 (*Zhūzǐ yǔlèi* 朱子語類, p. 220, AD 1270)

- b. ...移 過 那邊 去 坐...
 ...yí guò nàbiān qù zuò...
 ...move over there thither sit

‘...if you go over there and sit...’
 (*Zhūzǐ yǔlèi* 朱子語類, p. 193, AD 1270)

Note that in the two examples in (5) the object is a location argument that is introduced by the class two directional particle. In Modern Mandarin if the class two particle introduces an argument to the predicate and the speaker also wishes to include a class one particle then only the split structure can be used (see section 2.2.3). It was also possible in the language of this time for an object that was not introduced by the class two particle to appear between the two particles in a split construction. An example is shown in (6) below.

(6) **Early Mandarin split directional construct with non-location object.**

...遂	又	說	出	這	一般	道理	來。
...suì	yòu	shuō	chū	zhè	yìbān	dàolǐ	lái.
...thereupon	again	spea <u>k</u>	o <u>u</u> t	this	ordinary	sense	<u>h</u> ither.

‘...and then he spoke out that ordinary wisdom again.’
 (*Zhūzǐ yǔlèi* 朱子語類, p. 220, AD 1270)

The split directional construction of this time appears at least superficially to have the same properties as the modern construction. Exactly how the split directional construction came to develop these properties is not easy to see because there are no intermediate stages observable in the corpus. In the late Middle Chinese period there are no split directional constructions, but at the beginning of the Early Mandarin period they suddenly appear fully formed as they are in Modern Mandarin. The most likely path of development for the split directional constructions is that they first appeared in clauses where the class two directional particle introduced a location argument to the predicate and then the complex of a verb followed by a class two directional particle and its object unified with a class one directional particle in the separable construction. The location object would have to appear directly after the class two particle since it is introduced to the predicate by the class two particle. The class one particle could not appear before the object, however, since the directional particle slot in the inseparable construction would already be filled by the class two particle. This process of building up the split construction is shown in (7) below, where the clause in (5a) is built up layer by layer.

(7) Possible process for creating a split construct in Middle Chinese.

1.		趕	+ 出		
		<u>gǎn</u>	+ <u>chū</u>		
			↓		
2.		趕	出	+ 門	
		<u>gǎn</u>	<u>chū</u>	+ mén	
			↓		
3.		趕	出	門	+ 去
		<u>gǎn</u>	<u>chū</u>	mén	<u>qù</u>
			↓		
4.	...卻	趕	出	門	去 !
	...què	<u>gǎn</u>	<u>chū</u>	mén	<u>qù!</u>

In step 1 the verb *gǎn* 趕 ‘hurry’ unifies with the class two particle *chū* 出 ‘out’ within the inseparable construction. The class two particle then takes an object, *mén* 門 ‘door’ in step 2. This complete verb phrase then unifies with the class one particle in the inseparable construction in step 3. In step 4 the other peripheral modifiers of the clause are then added to produce the final clause.

At some stage the structures created by the process described above would have been reanalysed as being produced by a construction like the modern split directional particle construction, discussed in section 2.2.3. A new construction was then created through analogy that could unify with verbs and directional particles with metaphorical meanings. As is pointed out in section 2.2.3, the split constructs where the object does not refer to a location must be created by a special split construction and not through the process described above, otherwise there is no way to account for the peculiar syntactic constraints of these forms, also discussed in that section.

In the combined and split particle constructions the class two particle always appears first in linear order in the clause and the class one particle second. It is not possible to change the order and put the class one particle first. The reason why the order is fixed in this way can perhaps be explained by the principle of semantic relevance, as formulated by Bybee et al. (1994).

Bybee et al. show that forms that describe grammatical categories relevant to verbs are more likely to appear alongside verbs and subsequently to be grammaticalised in that position. For example, forms that express grammatical categories like tense, aspect and mood, are more likely to be realised as inflectional affixes on the verb than as independent forms. Her explanation for this phenomenon is to say that it is because these categories are highly semantically relevant to verbs. There is a hierarchy observable among these categories. Aspect is the most relevant because it relates directly to the internal composition of the event expressed by the verb, tense less so because it only relates the event expressed by the verb to the time of speaking, and mood least of all because it merely represents the speaker’s attitude towards the event. As expected, aspect is the most likely category to be realised by an inflectional affix, and mood the least likely. When these three categories are marked together on a

single verb they are usually marked with aspect closest to the base of the verb, with tense further away and mood the furthest away. This is a cross-linguistic tendency.

It could be argued that a path relative to a landmark that is contained within the discourse is more relevant to the verb than a path centred around the speaker or other central participant. This is because the landmark within the discourse is necessarily part of the event described by the verb, while the speaker or some other central participant is extrinsic to the event.¹ This distinction is similar to the distinction between aspect and tense. Aspect is the internal temporal structure of the event and tense is the temporal relationship of the event to the time of speaking. The landmark deictic centre is within the event and the speaker-based deictic centre is not. The class two directional particles, which describe an event centred around a landmark, should therefore appear closer to the verb because they express a category that is more relevant to the verb, and the class one particles should be further away from the verb, since they describe a category less relevant to the verb.

5.3. The development of the potential construction.

As is shown in section 2.2.4, in Modern Mandarin there is a potential construction that adds a potential infix to the inseparable construction, which allows potential constructs with the inseparable and the split syntactic configurations to be produced. The history of the development of the potential construction sheds light on the path of the development of the directional constructions proper. Below I briefly chart the diachronic development of the potential construction. In this discussion, I mostly follow Shi (2001), although my account differs from his in many ways.

The positive and negative potential particles are derived from a verb and a negative operator for verbs in earlier varieties of the Chinese language. The positive particle *de* 得 is derived from a full verb in Classical Chinese *dé* 得, which means ‘get’, as is shown in (8) below.

(8) **The verb *dé* in Old Chinese.**

反	其	國，	必	得	志	於	諸侯。
fǎn	qí	guó,	bì	dé	zhì	yú	zhūhóu.
oppose	GEN	country,	certainly	get	aspiration	PREP	nobles.

‘If he goes against his country, then he will get his aspiration from the nobles (i.e., have his way with the nobles).’

(*Zuǒzhuàn* 左傳, *Xī Gōng* 23rd year 僖公二十三年, p. 407, ca. 475 BC)

The negative potential particle *bu* 不 is derived from the negative operator *bù* 不 ‘not’, which modifies independent verbs and which survives up to the present in Modern Mandarin. *bù*, in both

¹ Langacker (2000) supports such a view in his discussion of subjectification in grammaticalisation.

Modern Mandarin and earlier varieties of Chinese, indicates simple negation unmarked for tense or aspect. An example of *bù* as a negative particle from a text from the classical period is shown in (9) below.

(9) **The negative operator for verbs *bù*.**

人	丕	知	而	丕	慍，	丕	亦	君子	乎？
rén	<u>bù</u>	zhī	ér	<u>bú</u>	yùn,	<u>bú</u>	yì	jūnzi	hū?
person	<u>not</u>	know	and	<u>not</u>	resent,	<u>not</u>	also	great.man	PART

‘Being unacknowledged and yet unresentful, is that not being like a gentleman?’
 (Lúnyǔ 論語, xué ér piān 學而篇, ca. 475 BC)

In the late Middle Chinese period (approximately AD 700-900) the verb *dé* was able to serve as a phase complement verb that indicated successful completion of an action, comparable to the modern phase verb *dào* 到 ‘reach’ (discussed briefly in section 2.4). This is shown in (10) below.

(10) ***Dé* as a phase complement verb in late Middle Chinese.**

禾山	還	說	得	這	個	也	無？
héshān	hái	<u>shuō</u>	<u>dé</u>	zhè	gè	yě	wú?
Heshan	yet	<u>speak</u>	<u>get</u>	this	CL	thing	not.have?

‘Has Heshan spoken about this thing yet or not?’
 (Zǔtángjí 祖堂集, p. 405, ca. AD 952)

At around the same time there were also structures like that shown in (10) where the object of verb was followed by another verb acting as a resultative within the pivot serial verb construction or a directional particle within the separable construction (Shi 2002:88). Some examples of this structure from the thirteenth century are shown in (11) below.

(11) ***Dé* with following resultative verb and directional particle.**

- a. 不 知 怎生 喚 得 它 醒。
 bù zhī zěnsēng huàn dé tā xǐng.
 not know how call get he awake
 ‘I don’t know how to call him awake.’
 (Zhūzǐ yǔlèi 朱子語類, quoted in Shi 2002:88, AD 1270)
- b. 公 不 曾 看 得 那 物事 出。
 Gōng bù céng kàn dé nà wùshì chū.
 You not PAST look get that thing out
 ‘You didn’t find that thing out.’
 (Zhūzǐ yǔlèi 朱子語類, quoted in Shi 2002:88, AD 1270)

The main verb in the sentence appears first, immediately followed by *dé*. This is then followed by an object if there is one and then finally the resultative verb or directional particle. There is not enough evidence to conclusively say that the directional form *chū* in (11b) is the product of a directional particle rather than a directional verb. However, it has a metaphorical meaning derived from the metaphor ‘to be outside is to know’, which is a metaphorical meaning that in Modern Mandarin is associated only with directional particles and not directional verbs, as is shown in section 2.3. This suggests that it is closer to a modern directional particle than an Old Chinese directional verb.

The directional form in (11b) is also separate from the verb. As was shown in section 4.2.2, class two directional forms almost always appear directly following the verb in the language of this time. It is easy to see why the direction form *chū* in (11b) above does not appear immediately after the verb. The postverbal position is already occupied by the form *dé*. This forces the directional form to appear separate from the verb, even though the tendency towards disyllabification wants to bind it to the verb. This is the only situation in which the class two directional forms appear separate from the verb in this period. This exception to the tendency towards disyllabification was lost in later times, as is discussed below.

In the Song Dynasty (13th century) it became possible for certain phase complement verbs to appear directly following the compound made up of a verb and the particle *de*. In the *Zhūzǐyǔlèi* the only forms that can appear in this position are *dào* 到 ‘reach’, *chéng* 成 ‘achieve’ and *jiàn* 見 ‘see’ (Wu 2003:294, 296). Some examples are shown in (12) below.

(12) **Phase complement verbs immediately following the positive potential marker.**

- a. 如何 說 得 到 其他 事！
 rúhé shuō dé dào qítā shì!
 how speak get reach other matter!

‘...how can we speak about other matters!’
 (*Zhūzǐ yǔlèi* 朱子語類, p.294, AD 1270)

- b. ...只 是 無 一 個 人 做 得 成 詩。
 zhǐ shì wú yí gè rén zuò dé chéng shī.
 ...only be not.have one CL person make get become poem.

‘...it was only that there wasn’t a person who could make it into a poem.’
 (*Zhūzǐ yǔlèi* 朱子語類, p.296, AD 1270)

- c. ...須 看 得 見 那 物事 方 能 時 習...
 ...xū kàn dé jiàn nà wùshì fāng néng shí xí...
 ...must look get see that thing just can time revise...

‘...you must be able to see that thing and then you will be able to study...’
 (*Zhūzǐ yǔlèi* 朱子語類, p.296, AD 1270)

By the eighteenth century the bound form, where the verb, potential particle and complement verb or particle appear as a single unit had spread and completely replaced the earlier separable form. No resultative complement, phase complement or directional particle appears separate from the verb complex by this time. An early example of the modern structure involving a directional particle can be seen in (13) below.

(13) **Directional particle in early example of modern potential construction.**

未 知 匡 超人 這 一 考得進 學 否， 且 聽 下 回 分解。
 wèi zhī kuāng chāorén zhè yī kǎo-de-jìn xué fǒu, qiě tīng xià huí fēnjiě.
 not.yet know Kuang Chaoren this one test-can-enter study not, furthermore listen next chapter explain.
 ‘To find out whether Kuang Chaoren passed the examination, you must listen to the next part.’
 (*Rǔlín wàishǐ* 儒林外史, p. 171, early 18th century)

The most probable path of development from the thirteenth century to the eighteenth century is that the form of the positive potential particle *de* became reduced as it was grammaticalised from a complement verb to a particle indicating potential achievement (Shi 2002:89). The grammaticalised nature of the positive potential particle in Modern Mandarin is attested by its reduced form. It is always pronounced in the neutral tone. As the form of the potential particle became reduced, it was no longer seen as a full constituent of the clause with a full pronunciation equivalent to one syllable that could fill the postverbal position and form a disyllabic compound with the verb. The change in status of *de* meant that for the purposes of the tendency towards disyllabification, a compound made up of a verb and *de* was no longer seen as a disyllabic unit. The tendency towards disyllabification could then act to draw the compound of verb and *de* together with the verb complement or particle to create a new compound. These new forms led to the creation of the modern potential constructions.

The negative potential particle had a similar diachronic development to the positive variant. The first recognisable negative potential forms had a structure like that shown in (14) below.

(14) **Late Middle Chinese separated negative potential construct.**

是 看 他 意 丕 出。
 shì kàn tā yì bù chū.
 be look 3.s intent not out.
 ‘This is not being able to see his intention.’
 (*Zhūzǐ yǔlèi* 朱子語類, quoted in Shi 2002:89, AD 1270)

Note that the directional form *chū* 出 in (14) has unclear status in the clause. Like the *chū* in (11b) above it expresses a metaphorical meaning that in Modern Mandarin is associated only with directional particles and not directional verbs. However, negation with *bù* in Modern Mandarin and

earlier varieties of Chinese is a verbal operation. The fact that *chū* in (14) is being directly negated by *bù* makes *chū* seem much more like a verb.

As with potential forms involving the positive potential particle *de*, potential forms involving the negative particle *bu* where the object appears after both the potential particle and the complement verb or particle began to appear around the thirteenth century, and were at first limited to specific verbs or particles. In the *Zhūzǐ yǔlèi* 朱子語類 only the phase complement verb *dé* 得 could appear in this sort of structure (Wu 1996:400; Shi 2002:118-120). An example is shown in (15) below.

(15) **Early bound negative potential form with phase complement *dé*.**

...卻	管	丕	得	那	富貴。
...què	<u>guǎn</u>	<u>bu</u>	<u>dé</u>	nà	fù-guì.
...however	<u>manage</u>	<u>not</u>	<u>get</u>	that	rich-important.

‘...but you cannot manage that rich and important person.’
(Zhūzǐ yǔlèi 朱子語類, p. 284, AD 1270)

The structure shown in (15) above gradually spread through analogy until all the resultative verbs, phase verbs and directional particles were able to appear in this structure. This process went to completion around the 16th century (Shi 2002:121). An example of the fused structure involving a combined directional particle from the early eighteenth century text *Rǔlín wàishǐ* 儒林外史 is shown in (16) below.

(16) **Directional particle in early example of modern negative potential form.**

...直	哭	得	眼淚	都	哭	丕	出來。
...zhí	kū	de	yǎnlèi	dōu	<u>kū</u>	<u>bu</u>	<u>chūlái</u> .
...straight	cry	DE	tear	all	<u>cry</u>	<u>not</u>	<u>out-hither</u> .

‘He cried so much that he couldn’t shed tears any more.’
(Rǔlín wàishǐ 儒林外史, p. 64, early 18th century)

It is not clear why the form of the negative operator should have become reduced to create the modern negative potential particle that could unify with the potential construction. The positive potential particle became reduced because it was reanalysed from being a phase complement verb to being a potential particle, as shown above, but the negative potential particle did not undergo such a dramatic change in status. It was already a particle of sorts, being a verbal operator. Like the modern negative operator, it probably had a clitic-like status. In Modern Mandarin the tone of the negative operators is largely determined by tone sandhi with the following syllable and in rapid speech is neutralised altogether. This suggests that these forms are not independent phonological words. The negative potential particles clearly belong to a different class from the negative operators, however. The syntactic position the negative operator occupies is different from that of the negative potential

particle, since the positive potential particle, which can occupy the same syntactic position as the negative potential particle, cannot occupy the same position as the negative operator. The form of the negative potential particle is also different from that of the negative operator for verbs — the negative potential particle always has the neutral tone, but the negative operator is generally pronounced in either the second or fourth tones in Modern Mandarin.

There does not seem to be any motivation for the negative operator to be grammaticalised into the negative potential particle. Most of the constructions that it modified had not changed in status at all. The phase and resultative complement verbs were still verbs in the language of this time and they are still verb in Modern Mandarin. Only the constructions that produced the directional forms may have been undergoing some change, but even in this case the extent of the change is not conclusive.

It is best to describe the grammaticalisation of the negative directional particle in terms of analogy, as it is outlined in section 1.2.2. It seems that part of the motivation in developing the negative potential particle was to fill out a paradigm already established by the positive potential particle. It is possible to imagine that the positive particle would could have attracted the negative operator and caused its reanalysis as the negative particle, since the positive particle developed earlier. As was shown above, in the thirteenth century the positive particle could already unify with three different phase complements before taking an object, while the negative potential particle could only unify with one. Phase complements that could unify with the positive potential particle in the potential construction, like *jiàn* 見, shown in (12c) above, could only unify with the negative potential particle in the separable structure, as is shown in (17) below.

(17) Separated construct involving *bù* from a time when the positive construct was bound.

而	今	看	道理	不	見...
ér	jīn	<u>kàn</u>	dàolǐ	<u>bú</u>	<u>jiàn</u> ...
and	today	<u>look</u>	sense	<u>not</u>	<u>see</u> ...

‘And today not seeing the sense of it...’

(*Zhūzǐ yǔlèi* 朱子語類, p. 302, AD 1270)

Once the negative potential particles had been grammaticalised from the negative operators, the normal process of extension that was described in section 1.2.2 could take place to allow the collocations available to the negative potential particle within the potential construction to be expanded.

The development of the potential construction described above provides further evidence for the influence of the tendency towards disyllabification. This construction first bound the positive potential particle and its preceding verb together into a disyllabic unit, which prevented complement verbs and directional particles from forming a disyllabic compound with the main verbs. This was the only situation in the Early Mandarin period when the class two particles were able to appear separate from the main verb. After the positive potential particle became more grammaticalised, the postverbal position was freed up and the complement verbs and directional particles were once again able to

appear in it. The negative operator also became reduced on analogy with the positive particle, allowing verbs modified by it to appear in the postverbal position.

In late Middle Chinese and Early Mandarin the adverbial form *jiāng* 將 could also be inserted before some directional forms. In both the *Dūnhuángbiànwén* 敦煌變文 and the *Zhūzǐyǔlèi*, *jiāng* is attested as appearing before the directional particles *lái* 來 ‘hither’ and *qù* 去 ‘thither’. In the *Zhūzǐyǔlèi* it is also attested as appearing before *xiàqù* 下去 ‘downwards thither’ and *chūqù* 出去 ‘out thither’. Some examples are shown in (18) below.

(18) **Constructs containing the adverb *jiāng*.**

a.	...說	得	個	起頭，	後面	懶	將	去。
	...shuō	dé	gè	qǐtóu,	hòumiàn	<u>lǎn</u>	<u>jiāng</u>	qù.
	...speak	get	CL	start,	back	<u>lazy</u>	<u>CONT</u>	<u>CONT</u>

‘...they start off saying something, and later they become lazy.’
(*Zhūzǐ yǔlèi* 朱子語類, p. 299, AD 1270)

b.	五	者	從	頭	做	將	下去...
	wǔ	zhě	cóng	tóu	<u>zuò</u>	<u>jiāng</u>	<u>xià-qù...</u>
	five	NOM	from	head	<u>do</u>	<u>CONT</u>	<u>CONT...</u>

‘The five kinds start off from the beginning...’
(*Zhūzǐ yǔlèi* 朱子語類, p.300, AD 1270)

According to most lexicographers of late Middle Chinese, e.g. Dong and Cai (1994:289-292) and Jiang and Cao (1997:184), *jiāng* in the postverbal position is a phase complement verb. It can have two functions, to indicate that an event is realised (much like Modern Mandarin *dào* 到 as a phase complement, discussed in section 2.4), and to indicate that an event is continuing. I have not been able to identify any examples of the first meaning, but both the examples in (18) demonstrate the second meaning.

The structure where *jiāng* appeared between the verb and directional form persisted up until at least the Yuan Dynasty (AD 1271-1368). After that time it was lost. The loss of this structure could be an indication of the increasing grammaticalisation of the directional forms, since as the directional forms became more grammaticalised away from their verbal origins and towards particles they came to be seen as describing a single event with the verb. Verbal elements that modified the event described by the verb without having clear scope over the particle would have suggested that the verb and particle described separate events. As shown above, there are examples of other phase complements appearing with directional verbs attested at this time, which suggests that the structure of verb followed by phase complement and directional form (VPD) was a general structure in the language. Other phase

complement verbs that appear in this structure include *dé* 得 before this form was grammaticalised, as in (11) above, and *què* 卻 in (19) below, which is repeated from (4b) in chapter 4.²

(19) **Phase complement verb *què* followed by directional form.**

a.	阿爺	賣	卻	孩兒	去...
	āyé	<u>mài</u>	què	háir	<u>qù</u> ...
	uncle	<u>sell</u>	off	child	<u>away</u> ...

‘The uncle sold off the child...’

(*Dūnhuángbiànwén* 敦煌變文, p. 384, Five Dynasties period AD 907-1127)

4.4. Conclusion.

The development of the combined and split directional constructions and the potential constructions grew out of the development of the directional particle constructions. These constructions made their first appearance towards the end of the Middle Chinese period and the beginning of the Early Mandarin period.

The first combined forms to appear are separable combined forms. They have the same properties as the modern separable combined forms, so it is quite likely that they were formed by constructions similar to the modern combined directional construction and the separable directional construction. The inseparable combined forms are only attested much later in the Modern Mandarin period. They were probably only able to appear after the directional particles reached a higher degree of grammaticalisation.

At the beginning of the Early Mandarin period the first split directional forms appear. Their development cannot actually be seen in the data available, but it is most likely that these forms were originally created by the class two particles unifying with the early inseparable construction and then taking an object. The class one particle then unified with the entire verb phrase through the separable construction. They subsequently became reanalysed as a separate construction with this form. Both the combined directional construction and the split directional construction have persisted into Modern Mandarin.

The positive and negative potential particles had independent origins even though they look very similar from a synchronic perspective. The positive potential particle emerged from an Old Chinese verb *dé* 得 ‘get’. This verb was first grammaticalised to create a phase complement verb.

² Although *jiāng*, *dé* and *què* do not survive as productive phase complement verbs in Modern Mandarin, the structure of a verb followed by phase complement and then directional particle (VPD) is not grammatical with any phase complement in Modern Mandarin, so it is the structure VPD that has become ungrammatical and not just those particle phase complements in that structure.

This phase complement verb was further grammaticalised to create the positive potential particle. As it was grammaticalised, its form was reduced to the extent that it is no longer counted for the purposes of the tendency towards disyllabification. This allowed the directional particles and other resultative complement and phase complement verbs to appear directly after it and before the object, creating a disyllabic compound with the preceding verb. The negative potential particle *bu* 不 had a similar development but in the opposite direction. The negative marker was first bound to the directional particle or resultative or phase complement and then the compound of negative particle and directional particle or complement was bound to the back of the host verb. The development of the negative particle was probably also helped by a process of paradigmatic analogy with the positive particle, which emerged earlier.

There are also forms attested in the late Middle Chinese and Early Mandarin periods where a phase complement verb appeared between the verb and directional particle. The phase complements attested in this position include *jiāng* 將 ‘CONT’, *dé* 得 ‘get’ and *què* 卻 ‘off’. The structure where a phase complement can appear between the verb and particle was later lost. The loss of this structure is perhaps an indication of the increasing grammaticalisation of the directional forms, since as the forms became further grammaticalised they were understood as describing single events with their host verbs and so other verbal elements that had scope over the verb but not over the particles could not intervene.

6. Summary and conclusion.

6.1. Summary.

In Modern Mandarin (AD 1900-present) there are constructs made up of a verb followed by a directional particle. These particles typically indicate a path associated with a motion event described by the preceding verb. Some of the particles can also appear with verbs that do not describe motion events. In these cases the particles take on metaphorical meanings, such as indicating aspect or reinforcing that something is produced or discovered as a result of the event described by the verb. These directional particles are diachronically derived from directional verbs, which survive alongside the directional particles in Modern Mandarin. The basic properties of the directional constructs in Modern Mandarin are discussed in section 1.1.

The directional constructs in Modern Mandarin are created by two main sets of constructions in the grammar of the language, the directional particle constructions and the syntactic constructions. The directional particle constructions create the lexical forms that appear in Modern Mandarin directional constructs. There are two main classes of directional particle construction, class one, which contains particles that describe paths oriented around a deictic centre anchored at the location of the speaker, and class two, which contains particles that describe a path oriented on a landmark in the discourse. There are two basic syntactic configurations associated with the particle constructions, the inseparable configuration, where the particles are bound to the end of their host verbs, and the separable configuration, where other constituents, like objects and aspect markers, can appear between the directional particles and their host verbs. These two configurations are created by the inseparable syntactic construction and the separable syntactic construction respectively. Both classes of particles can appear in the inseparable configuration, but only the class one particles can appear in the separable configuration. There is no clear difference in meaning between the separable and inseparable configurations, although it has been claimed that forms in the inseparable configuration tend to describe only perfective events.

The particles in the inseparable configuration are more like clitics than those that appear in the separable configuration. The particles in the inseparable configuration are pronounced in the neutral tone, while those in the separable configuration are pronounced with their full tonal values. This difference in form probably indicates a difference in degree of grammaticalisation. The particles in the inseparable configuration have a more reduced realisation and so are probably more grammaticalised. The two sets of forms are probably produced by two sets of competing constructions. Because of the close synchronic relationship between the two sets of constructions, I have decided to analyse the constructions with clitic-like forms as being derived from the separable particles.

In addition to the separable and inseparable configurations described above, there are the combined and split configurations. In the combined configuration, two directional particles, a class two particle and a class one particle, are joined together to make a compound directional particle. This particle can unify with either the separable or the inseparable construction to appear in the separable or inseparable configuration. There is also the split configuration, where a class two particle immediately follows the verb and is then followed by an object or aspect marker, which is then followed by a class one particle. This configuration looks superficially as if it is the product of the separable construction unifying with the inseparable construction, but several peculiar features of its syntax indicate that it is not, although this may be its diachronic source. The directional particle constructions and their associated syntactic constructions are discussed in chapter 2

There were no constructions like the modern directional constructions in Old Chinese (1000 BC-AD 200). There were, however, constructs that were similar in many ways to those produced by the modern directional constructions. These constructs were produced by directional verbs that unified with two syntactic constructions in Old Chinese, the unmarked verb phrase co-ordination construction and the contiguous serial verb construction. The unmarked verb phrase co-ordination construction produced constructs that typically described self-agentive motion rather than caused motion. That is, motion where an actor moves themselves rather than motion where an actor causes a theme to move. They could also produce constructs that involved both self-agentive motion and caused motion, where the actor and theme moved together. In constructs of this type the displacement verb would appear first, followed by the theme object and then the directional verb (VTD). The contiguous serial verb construction produced constructs that described caused motion only. The configuration of forms produced by this construction was displacement verb followed by motion verb then followed by the theme (VDT). These two configurations came about because of an alternation in the grammar of Old Chinese that allowed many verbs, especially directional verbs, to act either causatively or non-causatively. The constructions that produced the directional constructs in Old Chinese are described in chapter 3.

During the Middle Chinese (AD 200-1000) period the constructs that were originally produced in the Old Chinese period by directional verbs and their associated syntactic constructions went through various stages of reanalysis with the eventual result of producing the first modern directional constructions. Various factors shaped the path of development of the directional constructions at this time. During the Middle Chinese period the tendency towards disyllabification began to have an influence on the directional forms, eventually causing the class two forms to become bound to their host verbs. The class one forms were immune to this development, however, most probably because they were more highly grammaticalised. This created the modern syntactic distribution of the directional forms where the class two forms are always bound to their verbs, but the class one forms can be either free or separate.

The alternation between bound and separate directional forms that in Old Chinese conveyed a difference between whether the form was causative or non-causative was also reanalysed during the Middle Chinese period as encoding some other difference in meaning. This new meaning may have been related to aspect. Like the distinction encoded in the modern alternation, it is very elusive. This reanalysis of the bound and separable configurations was probably motivated by the general process of decausativisation occurring in the language of the time and the advanced grammaticalisation of the class one directional forms. By this stage the class one forms had been grammaticalised to the point that they had lost the ability to have independent argument structures, suggesting that distinctions of causativity would have been irrelevant at this time.

During this same period the semantic features of the directional forms also developed. At some point they lost the ability to act as independent predicates and describe separate motion events and came just to describe a path associated with the motion event described by the verb. They also developed some of the extended metaphorical meanings that they continue to bear today, like indicating aspectual meanings and reinforcing that the event described by a verb involves creating something. The developments in the directional forms that occurred during the Middle Chinese period are discussed in chapter 4.

In the late Middle Chinese period and into the Early Mandarin period (AD 1000-1900) the first combined directional forms appeared. The first forms look like those produced by the modern combined directional particle construction and the separable syntactic construction. It is reasonable to assume that constructions like these were already operating in the language, since it seems the directional particle constructions had already developed. The split forms also emerged at this time. They probably developed in the Middle Chinese period from constructs made by the class two directional forms first unifying with the inseparable particle construction and then the class one form unifying with the separable particle construction. Constructs of this type were later reanalysed to create the modern split construction. The development of the combined and split constructions is discussed in section 5.2.

From the end of the late Middle Chinese period and into the Early Mandarin period the potential construction developed. This construction arose out of the independent grammaticalisation of the positive negative potential particle *de* 得 and the pressure of the tendency towards disyllabification. The negative potential particle *bu* 不 was later grammaticalised on paradigmatic analogy with *de*. This is discussed in section 5.3.

6.2. Conclusion.

The history of the directional constructions presented above represents an account of their diachronic development from the Old Chinese period to the present. I have analysed the data presented by this research in terms of the theories of grammaticalisation and Construction Grammar. I have used

Construction Grammar to provide a representation of the beginning and end states of the grammar that was responsible for producing the constructs under examination and grammaticalisation theory to describe the changes that occur between these states. Note that even though I say ‘beginning and end states’, these points in the history of the language are arbitrarily chosen, since every language is constantly changing and so there is really no beginning or end to grammatical evolution (see section 1.1 for discussion of this point).

Under my analysis there was a group of constructs in an earlier stage of the language that were produced by a certain set of constructions. These constructs were then later reanalysed to create a new set of constructions that produce constructs that look similar in form to the original constructs, but which may show some differences in meaning, syntactic distribution or form.

Note that my description does not assume that one set of constructions *became* another, but that the constructs created by one set of constructions were reanalysed to generate a new set of constructions. To make this point clear, look at the connection between the Old Chinese unmarked verb phrase co-ordination construction and contiguous serial verb construction and the Modern Mandarin separable and inseparable constructions. The structures that these constructions produced are depicted schematically in table 6.1 below.¹

Table 6.1. Structures produced by Old Chinese and Modern Mandarin constructions.

construction	structure
OC unmarked verb phrase co-ordination	verb + (object) + directional verb + (location) V(O)D(L)
MM separable construction	verb + object + directional particle VOD
OC contiguous serial verb construction	verb + directional verb + (object) VDO
MM inseparable construction	verb + directional particle + (object/location) VD(O/L)

Although from the data presented in table 6.1 the structure produced by the Old Chinese unmarked verb phrase co-ordination construction looks similar to that produced by the Modern Mandarin separable construction, and the structure produced by the Old Chinese serial verb construction looks similar to that produced by the Modern Mandarin inseparable construction, it is not true to say that the unmarked co-ordination construction *became* the separable construction and the contiguous serial verb construction *became* the inseparable construction. As can be seen from the data presented in the body of this thesis and summarised in section 6.1 above, there is not a one-to-one correspondence between these constructions. There have been a series of complex reanalyses of constructs caused by a range of factors that have contributed to the development of the Modern Mandarin directional constructions. Constructs that carry similar meaning and have a similar form to those that in Old Chinese would have been produced by the unmarked verb phrase co-ordination construction would not necessarily be produced by the separable construction in Modern Mandarin.

¹ In table 6.1, OC stands for Old Chinese and MM for Modern Mandarin.

What I have shown in the Construction Grammar representation in this thesis is that it is possible to model the grammar at either end of a period of diachronic change and show explicitly what changes have come about to effect the change from the grammar of one period to the grammar of the next, relying on grammaticalisation theory to describe the actual processes of change.

This thesis has left many loose ends in the account presented. These loose ends mainly arise from the lack of detail in the data, which results from the small size of the corpus. With a larger corpus it should be possible to make a much finer-grained analysis of the constructs attested in each period, which would enable a much more precise and accurate account of the development of the directional constructions to be made. As was pointed out in chapter 2, the Modern Mandarin directional constructions are not identical to each other, but form a radial category with more and less prototypical members. A more detailed account of the development of the constructions would make the relationships between the various members of the category clearer, and would give a more precise picture of how the different member constructions influenced each other through analogy in the course of their development. The period most in need of more detailed examination is the time extending from the Tang Dynasty to the Five Dynasties period (AD 618-960) since, as shown above, this was a crucial time in the development of the directional constructions.

In addition to looking at the individual constructions within the category of directional constructions of Modern Mandarin, it would also be worthwhile to take a broader view of how the development of the directional constructions relates to the development of other similar constructions in the language. As was discussed in section 2.4 and pointed out in various other parts of the thesis, the resultative and phase complement constructions have many formal and semantic properties in common with the directional constructions and have also followed similar paths in their evolution. A broader view of how these three types of constructions have developed would provide both a better understanding of the general diachronic processes occurring in the language and maybe also give clues that would help to resolve unclear points in the development of the directional constructions.

The description given in this thesis of the directional constructions in Modern Mandarin does not provide a complete view of their place in the grammar of Modern Mandarin. The directional constructions interact with many other constructions not discussed in this thesis, such as the *bǎ* 把 construction, as can be seen in various examples in the thesis. The interaction of the directional constructions with these other constructions in Modern Mandarin and in earlier varieties of Chinese may provide more evidence about their diachronic evolution. A more complete account of the development of the directional constructions would also investigate the interaction between these constructions both in Modern Mandarin and earlier varieties of Chinese.

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