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Aspect in
Mandarin Chinese
A corpus-based study

Richard Xiao
Tony McEnery

Aspect in Mandarin Chinese

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by Richard Xiao and Tony McEnery

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A corpus-based study

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Preface

Mandarin Chinese as an aspect language has played an important role in the development of aspect theory. Nearly all of the major works on aspect theory make reference to Chinese. We decided to write this book because we felt that in spite of the importance of Chinese to aspect theory the exploration of aspect in Chinese, and by association aspect theory, was incomplete. Hence we began the work presented in this book which gives what we believe to be an accurate and complete account of aspect in Mandarin Chinese, encompassing both situation aspect and viewpoint aspect.

This book is the first corpus-based study of aspect in Chinese. Unlike previous research on aspect, which has not always taken attested language use into account, the model of aspect presented here was developed and tested using corpus data. In using corpus data, we have sought to achieve a marriage between theory-driven and corpus-based approaches to linguistics, a goal we see as very important.

The corpus-based model of aspect developed in this book represents a significant advance in aspect theory, which explores aspect at both the semantic and grammatical levels. The two levels correspond to the two components of aspect, namely, situation aspect and viewpoint aspect. The former is language independent while the latter is language specific. While the two-level approach to modelling situation aspect taken in this book has given a better account of the compositional nature of situation aspect by proposing a set of rules mapping verb classes at the lexical level onto situation types at the sentential level, it has also provided a more refined classification of situation aspect, most notably by distinguishing between two types of states.

This book is a systematic and structured exploration of linguistic devices which Chinese employs to express aspectual meanings. In addition to situation aspect, which is inherent in linguistic expressions of situations in human languages, this book identifies, on the basis of corpus data, four perfective and four imperfective viewpoints in Chinese. While some of these viewpoints have already been identified in previous studies of aspect in Chinese, our book has corrected many intuition-based misconceptions and associated misleading conclusions readily found in the literature. Some viewpoints, e.g. the completive aspect marked by resultative verb complements, have for the first time

been considered as independent viewpoints based on their behaviours in attested language use.

The work presented in this book is based on the PhD thesis of the first author and the research collaboratively undertaken by the authors on contrasting aspect/tense in English and Chinese. We are greatly obliged to the UK ESRC for supporting our research (award number RES-000-220135), without which this book could not have been produced.

We would also like to thank Professor Bernard Comrie for his constructive comments on our book proposal. We are similarly grateful to Professors Jim Miller, Geoffrey Sampson and Anna Siewierska for their critical reading and insightful comments on an earlier draft of this book.

On a personal level, Richard Xiao would like to thank Ms Hongyu Zhang and Miss Yina Xiao for their profound love as well as understanding of “a man without a family” in the process of writing this book. Dr Scott Piao and Mr Zhiwen You also deserve special thanks for their encouragement in times of stress and crisis. Tony McEnery would like to thank his co-author, Richard Xiao. Tony is grateful to Richard for his determination to engage him in Chinese linguistics and for his professionalism in conducting the research on their ESRC project.

Last but by no means least, we thank Mr Kees Vaes from John Benjamins, the series editors Professors Werner Abraham and Michael Noonan, and the referees for their kind support and insightful comments.

RZX AMM

Abbreviations and symbols

*	Unacceptable example
?	Marginally acceptable example
#	Infelicitous for the intended meaning
FLOB	The Freiburg-LOB Corpus of British English
Frown	The Freiburg-Brown Corpus of American English
LCMC	The Lancaster Corpus of Mandarin Chinese
POS	Part-of-speech
XML	Extensible mark-up language
ACC(s)	Accomplishment(s)
ACT(s)	Activity (activities)
ACH(s)	Achievement(s)
ILS(s)	Individual-level state(s)
SEM(s)	Semelfactive(s)
SLS(s)	Stage-level state(s)
STA(s)	State(s)
IPFV	imperfective
PFV	perfective
ACTL	The actual aspect marker <i>-le</i>
CONT	The continuative aspect marker <i>-xiaqu</i>
COS	Change-of-state
DC	Directional complement
DBL	Sentence-final <i>LE</i> marking both actuality and current relevance
DUR	Durative <i>-zhe</i>
EXP	The experiential <i>-guo</i>
INC	The inceptive aspect marker <i>-qilai</i>
NP(s)	Noun phrase(s)
PP(s)	Prepositional phrase(s)
PROG	The progressive <i>zai</i>

RVC(s)	Resultative verb complement(s)
RVCC(s)	Completive RVC(s)
RVCD(s)	Directional RVC(s)
RVCS(s)	Result-state RVC(s)
VDUP	Verb reduplication
ET	Event time
RT	Reference time
ST	Speech time
BA	The <i>ba</i> construction
CLF	Classifier
DE	Resultative <i>de</i> construction
GEN	Genetic
PASS	Passive
PRT	Particle

CHAPTER 1

Introduction

Many grammars (even relatively modern ones) are not very sophisticated or accurate when it comes to verb aspect. This is one of my spot checks – one of several – that I use to gauge the quality of a new grammar [...] I check what they have to say about aspect. (Mark B. O'Brien 1997)

This book is about ‘aspect’, and more specifically aspect in Chinese. The book outlines a new model of aspect, based upon our investigation of the Chinese language using a fusion of native speaker intuition and evidence from corpora of Mandarin Chinese. The overall purpose of the book in part is to demonstrate how corpora and linguistic theory can interact. But this secondary goal should not distract readers from the main purpose of this book – to outline a new model of aspect which is generalisable beyond Chinese. As part of our development of this model, we will use a corpus of modern British English to test the generalisability of our findings for Chinese on English. In order to begin the process of presenting this model, we need to answer two basic questions – “what is aspect” and “why study aspect in Chinese.”

1.1. What is aspect and why study aspect in Chinese?

To begin with, let us develop a working definition of aspect which will suffice as an answer to the question “what is aspect?” for now: aspect is an important linguistic category which relates to the study of linguistic devices that enable a speaker to direct the hearer’s attention to the temporality of a situation, either intrinsic or viewed from a certain perspective. Such knowledge is required for interpreting event sequences in discourse (Dowty 1986; Moens & Steedman 1988; Passonneau 1988), processing temporal modifiers (Antonisse 1994), and describing allowable alterations and their semantic effects (Resnik 1996; Tenny 1994). The perspectives from which situations are presented “sometimes uniquely determine, and sometimes just strongly constrain” the underlying temporal structures of these situations (Nakhimovsky 1988: 33; cf. also Bickel 1997: 115). Aspect plays an important role in the interpretation of the

temporal information contained in a sentence. Unsurprisingly, considering its importance, aspect is a common linguistic feature which has been the subject of research in a number of areas such as linguistic theory (e.g. Comrie 1976), language philosophy (e.g. Galton 1984), language typology (e.g. Dahl 1985), language acquisition (e.g. Salaberry & Shirai 2002) and computational linguistics (e.g. Passonneau 1988).

While aspect and tense both provide temporal information, they are two different concepts. On the one hand, tense is deictic in that it indicates the *temporal location* of a situation, i.e. its occurrence in relation to a specific reference time. On the other hand, aspect is non-deictic in that it is related to the *temporal shape* of a situation, i.e. its internal temporal structure and ways of presentation, independent of its temporal location (cf. Lyons 1977:705).

Having given a brief description of aspect, we can now turn to our second question – why study aspect via the Chinese language? Chinese has a different relation to aspect by comparison to a language such as English. Languages can broadly be classified as tense languages and aspect languages depending upon how they denote time relations. In a tense language, such as English, tense and grammatical aspect are often combined morphologically. For example, in English the simple past not only presents a situation as perfective, but also locates it prior to the speech time; similarly, the French *imparfait* is both past and perfective. However, grammatical aspect and tense can also be encoded distinctly, as demonstrated in Polish (Weist et al. 1984). In contrast with a tense language like English, Mandarin Chinese does not have the grammatical category of tense (cf. Smith 1997; Kang 1999; *inter alia*), because the concept denoted by tense is lexicalised, i.e. indicated by content words like adverbs of time. Aspectual meanings, however, are conveyed systematically by aspect markers – grammaticalised function words that are semantically encoded to convey aspectual meanings. In other words, Chinese grammatically marks aspect but does not grammatically mark tense. As such, Chinese is exclusively an aspect language (cf. Wang 1943; Gao 1948:189; Gong 1991:252; Norman 1988). As an aspect language, Mandarin Chinese has played an important role in the development of aspect theory. Nearly all of the major works on aspect theory make reference to Chinese (e.g. Comrie 1976; Smith 1997). It is on these grounds that we decided to focus on Chinese in investigating aspect.

Aspect languages are “concerned with whether the action is completed or not, whether the action is in progress or not. The plotting of action, so important in tense languages, is not important in Chinese” (Norman

1988: 163). This observation is in line with the claim made nearly four decades earlier by Wang Li:

Broadly speaking, an event and time can be related by 1) focusing on when it happens while ignoring its temporal distance and length; and 2) focusing on its time duration and whether it starts or finishes while ignoring when it happens. The first approach is taken by Romance languages (like French, Italian and Spanish, etc.) while the second is typical of Chinese. (Wang 1943: 151, our translation)

Aspect markers are pervasive in Chinese. As such it is necessary to take account of aspect markers in Chinese when interpreting almost any Chinese utterance. The main focus of this book therefore, will be on grammatical aspect where the tense/aspect dichotomy is relevant. However, before proceeding to outline the research presented in this book, it is appropriate to outline previous research undertaken on aspect in Chinese.

1.2. Previous research on aspect in Chinese

Unfortunately, previous research on aspect in Chinese is deficient in a number of ways. With one or two exceptions, previous research on aspect in Chinese has been limited to a few aspect markers like *-le*, *-zhe* and *-guo*.¹ Little attention has been paid to date to the question of systematically describing the linguistic devices that the language employs to express aspectual meanings. Still less attention has been paid to the inherent temporality of situations denoted by utterances in Chinese. But aspect markers that signal different perspectives from which a situation can be presented are only one component of aspect, which interplays with the inherent temporal features of a situation to determine the aspectual meaning of an utterance (see chapter 2).

While Chinese is recognised as an aspect language, and aspect marking has been studied intensively in Chinese linguistics in the last three decades,² there is no generally agreed account of the aspect system of this language, as different researchers define aspect in their own ways. As a consequence there is much controversy surrounding the form and function of aspect markers. This leads to the following questions:

- Is it necessary to distinguish the verbal *-le* and the sentential *le*? Does the verbal *-le* function to mark the completiveness, terminativeness or simply the realisation of a situation? Can *-le* interact with stative situations?

- Does the form of marker *-zhe* function to signal resultativeness, progressiveness or durativity?
- Does verb reduplication function semantically as an aspect marker? If so, does it encode tentativeness, casualness, mildness, slightness or delimitativeness?
- Is it necessary to differentiate between the aspect marker *-guo* and the resultative verb complement (RVC) *guo*?³ How can one account for the interchangeability between *-le* and *guo* as in *mingtian ni chi-guo/-le wanfan lai zhao wo* “Come to see me after you have supper tomorrow”?
- Do the forms of *zai*, *-qilai*, *-xiaqu* and RVCs encode aspect?

These questions, which are addressed and answered in this book, serve a clear purpose for the moment – they clearly show that aspect in Chinese is an area of ongoing debate and research.

1.3. Studying aspect: intuition vs. corpus-based approaches

While “linguistic analysis will benefit if it is based on real language used in real contexts” (Meyer 2002:11), previous studies of aspect have largely been conducted without recourse to attested language data. They have, rather, been based on a handful of confected examples which, if not intuitively unacceptable, are atypical of attested language use. Furthermore, those proposals have not, to date, been tested with corpus data. As far as we are aware, with few exceptions (e.g. Chappell 1988, 1998), to date there has been little research on aspect in Chinese based on corpus data. Yet corpora have a role to play both in developing and testing such theories, as demonstrated in the remaining chapters of this book.

With that said, we do not mean that the corpus-based approach and the intuition-based approach are completely exclusive. The two are complementary (cf. McEnery & Wilson 2001:19). With the intuition-based approach, researchers can invent purer examples instantly for analysis, because intuition is readily available and invented examples are free from language-external influences existing in naturally occurring language. However, intuition should be applied with caution (cf. Seuren 1998:260–262). Firstly, it is possible to be influenced by one’s dialect or sociolect. As such, what appears unacceptable to one speaker may be perfectly felicitous to another (cf. Xiao

2002:17). Secondly, when a researcher invents an example to support or disprove an argument, he is consciously monitoring his language production. Therefore, even if his intuition is correct, the utterance may not represent typical language use. Finally, results based on introspection alone are difficult to verify as introspection is not observable. In contrast, all of these disadvantages are circumvented by the corpus-based approach. Additional advantages of the corpus-based approach are that a corpus can find differences that intuition alone cannot perceive (cf. Francis, Hunston & Manning 1996; Chief, Hung, Chen, Tsai & Chang 2000) and a representative corpus can yield reliable quantitative data. As we wish to both quantify aspect in Chinese and develop a model of aspect, we will use corpus data as our main source of evidence throughout this book. Where appropriate, we do call on native speaker intuition. Nonetheless, attested language data is the principal source of evidence that we use.

The use of corpus data as an input to the semantic analysis of aspect, a methodology to be elaborated in the following chapters, represents something new. Our study seeks to achieve a marriage between theory-driven and corpus-based approaches to linguistics, with the goal of providing an effective and fruitful avenue for the study of aspect.

Having decided to take a corpus-based approach, we can now present the corpus data used in this book. We used five corpora in developing and testing the aspect model presented in this work, two monolingual corpora of Mandarin Chinese, namely Weekly and LCMC, two English corpora (FLOB and Frown) and an English-Chinese parallel corpus. All of the corpora are annotated with part-of-speech information and the parallel corpus is further aligned at the sentence level.

The Weekly corpus. The principal Chinese corpus on which the research presented in this book is based consists of newspaper texts from *Nanfang Zhoumo* “The South Weekly” and is thus named the Weekly corpus. *Nanfang Zhoumo*, with a sales volume of 1.3 million copies, is one of the largest, most influential and comprehensive weekly newspapers published in China. The sampling period for our corpus covers one calendar year, with the data included in the corpus being taken from the CD-ROM edition of the newspaper for the year of 1995. We divided our corpus into a training and a test set of data. The training set provided training material for our model while it was under development. The test set provided data that could serve as an unseen test for our model developed on the basis of the training data. Our test and

training data follows best practice, in that a good test corpus is qualitatively similar to the training corpus, but contains data which the learning algorithm or model has never seen before (cf. van Everbroeck 1996). In terms of size, a test corpus with a size of one tenth of the training corpus is normally assumed to be sufficient. The test corpus used in this book follows these guidelines. The training corpus contains 125,825 Chinese characters and the test corpus contains 12,869 characters. In terms of content, the test corpus mirrors the training corpus, covering a range of topics such as social, economic, legal and arts news. It is this corpus that we use in the tests carried out on our model of aspect later in this book, with the training corpus only being used to provide examples and as the basis of the general model development.

Table 1.1. Frequency of aspect markers in the Weekly corpus

Aspect marker	POS tag	Frequency	
		Training corpus	Test corpus
Actual <i>-le</i>	ACTL	1,019	119
COS <i>le</i>	COS	164	11
Double-role <i>LE</i>	DBL	23	4
Experiential <i>-guo</i>	EXP	75	9
Durative <i>-zhe</i>	DUR	196	42
Progressive <i>zai</i>	PROG	77	11
Inceptive <i>-qilai</i>	INC	18	2
Continuative <i>-xiaqu</i>	CONT	8	0
Delimitative verb reduplication	VDUP	34	4
Completive RVC (<i>wan, guo</i> and <i>hao</i>)	RVCC	33	12
Directional RVC	RVCD	740	92
Result-state RVC	RVCS	780	84
TOTAL		3,167	390

The Weekly corpus is small, the training corpus being merely 125,825 Chinese characters in size. Our defence of the use of this corpus is that, while small, the corpus contains sufficient examples of the linguistic feature we are interested in, i.e. aspect markers. As shown in Table 1.1, there are plenty of examples of these markers in the corpus. The high frequency and rich variety of aspect markers in the corpus not only furnishes further evidence that Chinese is an aspect language, but also justifies our choice of this corpus for the study of aspect in Chinese. Furthermore, the corpus achieved a sufficiently

representative coverage, for a corpus of that size, of styles and domains.⁴

The FLOB/Frown corpora. While this book is principally concerned with aspect in Chinese, the model developed in this book is tested by contrasting Chinese and English. As English corpora are readily available for research purposes, we did not have to build an English corpus in order to do this. After reviewing available corpora, we decided to use the Freiburg-LOB Corpus of British English (i.e. FLOB, cf. Hundt, Sand & Siemund 1998) as its sampling period is close to that of the Weekly corpus built by us. A further attraction of FLOB is that it has a matching American English corpus, the Freiburg-Brown corpus (i.e. Frown, cf. Hundt, Sand & Skandera 1999).

Table 1.2. Text categories of FLOB

Code	Text category	No. of samples	Proportion
A	Press reportage	44	8.8%
B	Press editorials	27	5.4%
C	Press reviews	17	3.4%
D	Religion	17	3.4%
E	Skills, trades and hobbies	38	7.6%
F	Popular lore	44	8.8%
G	Biographies and essays	77	15.4%
H	Miscellaneous (reports, official documents)	30	6.0%
J	Science (academic prose)	80	16.0%
K	General fiction	29	5.8%
L	Mystery and detective fiction	24	4.8%
M	Science fiction	6	1.2%
N	Western and adventure fiction	29	5.8%
P	Romantic fiction	29	5.8%
R	Humour	9	1.8%
Total		500	100%

FLOB is a balanced corpus of present-day British English compiled at Freiburg University in 1991–1992. The sampling frame of the corpus is exactly the same as that used in the compilation of LOB (the Lancaster-Oslo-Bergen corpus, see Johansson, Leech & Goodluck 1978) with the notable exception that LOB was sampled from texts produced in 1961 whereas FLOB was sampled from texts current in 1991–1992. The corpus contains 500 text segments of approximately 2,000 words sampled from 15 text categories (see Table 1.2), totalling roughly one million words.

The two Freiburg corpora share the exactly same parameters except that FLOB sampled British English while Frown sampled American English. They will be used in combination with the LCMC corpus, in chapter 6, to contrast aspect marking in Chinese, British English and American English.

The Lancaster Corpus of Mandarin Chinese (LCMC). While the main concern of this book is to model aspect in Chinese, we will also contrast aspect marking in English and Chinese, in chapter 6, on the basis of LCMC and FLOB/Frown. LCMC is a one-million-word balanced corpus of written Mandarin Chinese.⁵ The corpus was designed as a Chinese match for FLOB (see McEnergy, Xiao & Mo 2003). In addition to monolingual studies of the Chinese language, LCMC, in combination with FLOB/Frown, is also a sound basis for contrastive studies of Chinese and English. As McEnergy & Xiao (forthcoming) observe, two well-matched monolingual corpora serve as a more reliable resource than a parallel corpus for contrastive studies, whether one wishes to compare the two languages as a whole or compare them by text type (see section 6.1).

In LCMC, the FLOB sampling frame is followed strictly except for two minor variations. The first variation relates to the text categories covered – we replaced *western and adventure fiction* (category N) with *martial arts fiction*. There are three reasons for this decision. Firstly, there is simply no western fiction in China; secondly, martial arts fiction is broadly a type of adventure fiction and it is a very popular and important fiction type in China and hence should be represented; thirdly, the language used in martial arts fiction is a distinctive language type and hence once more one would wish to sample it. Most stories of this type, even though they were published recently, are under the influence of vernacular Chinese, i.e. modern Chinese styled to appear like classical Chinese. While the inclusion of this text type has made the tasks of POS (part-of-speech) tagging and post-editing more difficult, it may also make it possible to compare representations of vernacular Chinese and modern Chinese.

The second variation was caused by problems we encountered while trying to keep to the FLOB sampling period. Considering the availability of texts of some categories (notably F, D, E, and R), we decided to modify the FLOB sampling period slightly by also including some samples for ± 2 years of 1991 when there were not enough samples readily available for 1991. We assume that varying the sampling frame in this way will not influence the language represented in the corpus significantly.

The LCMC corpus has been constructed using written Mandarin Chinese texts published in Mainland China to ensure some degree of textual homogeneity. It should be noted that the corpus is composed of written textual data only, with items such as graphics and tables in the original texts replaced by gap elements in the corpus texts. Long citations from translated texts or texts produced outside the sampling period were also replaced by gap elements so that the effect of translationese could be excluded (McEnery & Xiao forthcoming) and L1 quality guaranteed. LCMC became available in the later stages of this research, and hence is used only in chapter 6 of this book.

The English-Chinese Parallel Corpus (ECPC). In addition to contrasting aspect marking in the two languages, chapter 6 also explores how aspectual meanings in English are translated into Chinese. For this purpose, we built an English-Chinese parallel corpus. A parallel corpus can be defined as a corpus that contains source texts and their translations. Corpora of this type are particularly useful for translation studies (see McEnery & Xiao forthcoming). Parallel corpora can be uni-directional (e.g. from English into Chinese or from Chinese into English alone) or bi-directional (e.g. containing both English source texts with their Chinese translations as well as Chinese source texts with their English translations). As in this book we are interested in Chinese expressions of translated aspectual meanings from English, we are using a unidirectional parallel corpus for our research where English is the source language and Chinese is the target language. The corpus is composed of bilingual texts taken from *English World*, a web-based journal published in China.⁶ The sampling period is between October 2000 and February 2001, during which 121,493 English words and their translation in the form of 135,493 Chinese words were gathered.

We have now established what we will be studying, outlined why we wish to study it and described the methodology and data we will use in our research. Yet one important question remains to be answered – what theoretical model guides our approach to aspect?

1.4. The theoretical framework and an overview of this book

The basic theoretical framework used in this book is the two-component aspect model proposed by Smith (1991, 1997). According to this theory, aspect is compositional in nature. The aspectual meaning of a sentence is the

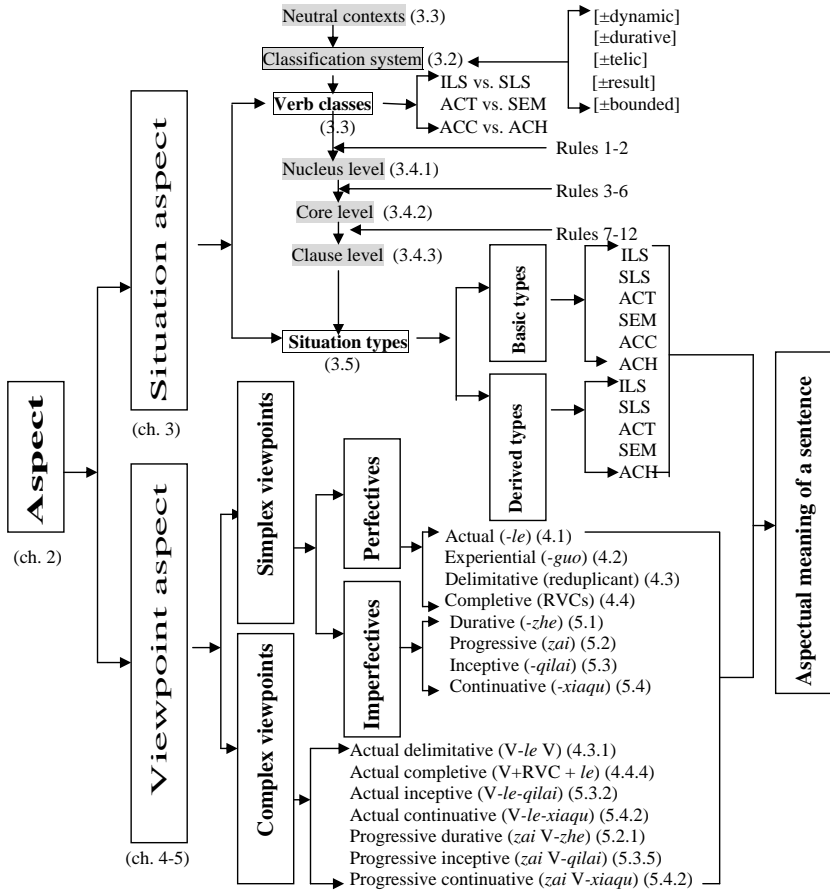


Figure 1.1. The two-component model of aspect in Mandarin Chinese

synthetic result of ‘situation aspect’ and ‘viewpoint aspect’ (i.e. grammatical aspect). The former refers to the intrinsic aspectual properties of idealised situations while the latter refers to the speaker’s choice of a perspective from which a situation is presented. The two are independent yet interacting components of aspect. It will be argued in this book, however, that Smith’s theory while useful, contains some flaws as it stands (see section 2.2). It needs to be modified significantly in order to model aspect in Chinese. In developing our model, it must be noted that on the one hand, aspect consists of situation aspect at the semantic level and viewpoint aspect at the grammatical level (see

section 2.5); on the other hand, situation aspect is modelled as ‘verb classes’ at the lexical level (see section 3.3) and as ‘situation types’ at the sentential level (see section 3.5), with the latter being the composite result of the interaction between verb classes and their complements, arguments and non-arguments such as peripheral adjuncts and viewpoint aspect at the ‘nucleus’, ‘core’ and ‘clause’ levels (see section 3.4).

Figure 1.1 is an overview of our model of aspect in Chinese. The numbers in the brackets indicate the chapter or section numbers for the corresponding topics. In addition to chapters 2–5 outlined in the figure, we will use three comparable L1 language corpora and an English-Chinese parallel corpus, in chapter 6, to contrast aspect marking in Chinese and British English and American English, and to explore how aspectual and temporal meanings in English are translated into Chinese. It is this complexity that is modelled in this book.

At this point, the model itself clearly has not been fully justified and presented. Consequently this figure should be viewed as a useful reference point for readers seeking to understand a specific element of the work presented in this book in the overall context of this book. However, with the overall model outlined, we can now proceed to outline the goals we have in presenting this research.

In terms of goals, our most important goal is to refine and expand Smith’s model of aspect based upon the corpus-based research we have undertaken to provide an explanatorily adequate account of aspect. Yet we wish to base this explanatory account on a descriptively adequate account of aspect in Chinese. Our work presents a new, corpus-based, description of aspect in Chinese to replace the numerous, partial, published accounts. This new account of Chinese aspect will argue, on the basis of corpus evidence, that even in the case of aspect markers as widely studied as *-le*, important aspects of their meaning/use have been overlooked. Omissions such as this, we believe, are unacceptable. Before we proceed to present our account of aspect in Chinese, however, it is appropriate to refine our definition of aspect, which will be done in chapter 2.

Notes

1. Chinese aspect marker and examples are given in Romanised form using Pinyin symbols.

2. Klein, Li & Hendriks (2000:723) estimate conservatively that over 200 articles have been published on the linguistic analyses of aspect markers in Chinese.
3. RVC is an acronym of a ‘resultative verb complement’ like *open* in *push the door open* (see sections 3.4.1 and 4.4).
4. At the time of writing, a much larger balanced corpus, the Lancaster Corpus of Mandarin Chinese, is under construction at Lancaster University (see below). However, as the corpus is released in the later stages of this research, we decided to take the Weekly corpus as the major source of empirical evidence while shifting our focus to trying to minimise any adverse effects arising from the limited size of the Weekly corpus.
5. LCMC is created as part of our research project “Contrasting tense and aspect in English and Chinese” funded by the UK Economic and Social Research Council (Grant Ref. RES-000-220135). The corpus is distributed free of charge for use in non-profit-making research. The manual accompanying the corpus, as well as the details for ordering, can be accessed online at the corpus website <http://www.ling.lancs.ac.uk/corplang/lcmc> or its Chinese mirror site in China at http://www.cass.net.cn/chinese/s18_yys/dangdai/LCMC/LCMC.htm.
6. The web-based journal can be accessed at <http://www.bentium.net>. The corpus is a component of the Babel English-Chinese Parallel Corpus, which is available online at <http://www.ling.lancs.ac.uk/corplang/babel/babel.htm>.

CHAPTER 2

Two-component aspect theory

In this chapter, we will first establish a definition of aspect on the basis of a review of the literature on aspect theory. Following from this we will present a theoretical framework designed to model aspect. This framework forms the foundation of our research on aspect in Chinese presented in chapters 3–5.

2.1. Definitional issues

While aspect has been the subject of much research, defining aspect can be surprisingly difficult (cf. Santos 1996; O'Brien 1997). As Holisky (1981: 128) comments “[t]here are almost as many definitions for *aspect* as there are linguists who have used it.” Consequently our first task in this chapter is to consider the key elements of aspect in order to produce a definition of the term which, while being of use to this book, is also situated in the broad body of research on aspect.

Aspect as a concept has developed over time, and can roughly be typified as one of two things. The first approach to aspect is intimately related to the origin of the term. The term ‘aspect’ can be tracked back to Grech (1827), who first used the Russian term *vid* “view” in his *Russian Grammar* (cf. Klein 1994: 27). The Russian term was translated into French as *aspect* and borrowed by English (cf. Lyons 1977: 705). The origin of the term shows that aspect is originally *perspectival*, i.e. concerned with the viewpoint or perspective the speaker takes in looking at a situation. A heavily quoted definition typical of this vein of research is given by Comrie (1976: 3): “aspects are different ways of viewing the internal temporal constituency of a situation.” Of course, Comrie is neither the first nor the last linguist to approach aspect in this way. Krusinga (1931: 221), for example, suggested that aspects “express whether the speaker looks upon an action in its entirety, or with special reference to some part.” More recently, Johnson (1981: 152) defined aspect as “reference to one of the temporally distinct phases in the evolution of an event through time.”

However, a later view of aspect developed which saw the first view as, at

best, a partial account of aspect. Linguists came to realise that the internal temporal structures of situations also contribute to aspectual meanings and so the term aspect broadened to include the internal temporal features of situations, i.e. whether a situation is dynamic or stative, durative or punctual, and telic or atelic. Dynamic vs. stative, durative vs. punctual, and telic vs. atelic are three important oppositions of semantic features closely related to the temporal structure of a situation. These three binary features are widely used for aspectual classification in the literature.¹ They correspond to [\pm dynamic], [\pm durative] and [\pm telic] in this book (see section 3.2). While the meanings of dynamicity and durativity are self-evident, it is sufficient for the moment to note that telicity is related to a natural final endpoint.

The classification of lexical verbs (i.e. ‘aspectual class’, cf. Schilder 1997:8) based on their temporal properties is actually what the German term *Aktionsart* ‘kind of action’ typically covers. The term *Aktionsart* in this sense was introduced by Agrell (1908), though it had been used before by Streitberg (1889) in a quite different sense, i.e. roughly like ‘aspect’ in its original sense (cf. Klein 1994:17, 225).

While not necessarily using the terms ‘aspect’ and ‘*Aktionsart*’, the distinction is apparent in the opposition of *grammatical* vs. *lexical* aspect (cf. Siewierska 1991:116; Olsen 1997; Bickel 1997:115; Hsieh 2001:234), *subjective* vs. *objective* aspect (cf. Smith 1983:480, 493ff; Kruisinga 1931:232–233; Dahl 1981:83), *aspect* vs. *character* (Kruisinga 1931:230–237), *aspectual class* vs. *aspect form* (Johnson 1981:153), *primary* vs. *secondary* aspect (Galton 1997), *procedural characteristics* vs. *situational focus* (Bach 1985:145; cf. Brinton 1988:257), *viewpoint aspect* vs. *situation aspect* (Smith 1983, 1991, 1997) and *aspectual class* vs. *grammatical aspect* (de Swart 1998). The *Aktionsart* of English verbs has generally not been the subject of study in traditional grammar and has only recently been studied in linguistic accounts of English verbs (cf. Brinton 1988:5). More recently, however, *Aktionsart* has gained prominence in aspect scholarship. Some authors even go to the extreme of using the term aspect to refer to *Aktionsart* only. For example, Jacobson (1971:130–147) suggests that aspect “deals with temporal values inherent in the activity or state itself.”

The two sets of definitions discussed above actually represent two different notions. Unfortunately they share the same name, which inevitably leads to terminological confusion. This confusion is widely recognised (see Comrie 1976:1; Friedrich 1974: S2–3, S6–9; Brinton 1988:4–5; *inter alia*), and can

lead to “aspect, *Aktionsart*, and even tense terms...[being]...used interchangeably” (Brinton 1988: 4).

The lack of terminological consistency in the discussion of aspect makes reviewing research on aspect a very challenging task. For example, the distinction between aspect and *Aktionsart* is often ignored or blurred, or made in different ways (cf. Comrie 1976: 67n). Consider the three “basic aspect categories” proposed by Friedrich (1974: S36): (a) durative, continuative, imperfective, etc.; (b) punctual, completive, perfective, etc.; (c) stative, perfect, etc. Similar views are also found in Holisky (1981), Hopper (1979), Li, Thompson & Thompson (1982) and Decker (1998).

Friedrich uses the term aspect to cover the classical meaning of the term, but also *Aktionsart*. In his model, ‘punctual’ equals ‘perfective’ and ‘durative’ equals ‘imperfective’. But this is decidedly not true. As will be discussed at greater length later in sections 2.4 and 3.2, the durative/punctual distinction is clearly related to *Aktionsart*, whereas the perfective/imperfective distinction is clearly related to aspect in its original sense. For example, a durative situation like *John crying* and a punctual situation like *John coughing* can be presented both perfectly (*John cried* and *John coughed*) and imperfectly (*John was crying* and *John was coughing*). Those linguists who have been mindful of the aspect/*Aktionsart* distinction have not necessarily agreed upon how to distinguish the two. For the purpose of the work presented here, aspect subsumes both the perfective/imperfective distinction and *Aktionsart*. However, as will become apparent later, the subcomponents of aspect are treated differently by us, unlike for example, Friedrich (*ibid*), who treated perfective/imperfective and *Aktionsart* as though they were almost synonymous.

While Comrie (1976) and Krusinga (1931) explicitly define aspect as different perspectives for presenting situations, Jacobson (1973) uses the term to refer to the internal temporal structures of situations, Smith (1991, 1997) does not accept this opposition. Rather, her definition is inclusive of both: “Aspect is the semantic domain of the temporal structure of situations and their presentation” (Smith 1991: 3, 1997: 1). According to Smith, the internal temporal structure and the perspectives from which situations are presented are two separate but equally important components which interact to determine aspectual meanings. In Smith’s model, the first component of aspect, ‘situation aspect’, concerns the internal temporal features of ‘idealised situations’ (Smith 1997: 17) such as [\pm dynamic], [\pm durative] and [\pm telic] (see section 3.2). Different combinations of these temporal features form different

‘situation types’ (*ibid*: 17). The second component is what Smith calls ‘viewpoint aspect’ (*ibid*: 60), which “enables the speaker to present the event talked about from a particular temporal perspective” (Smith 1988: 230). For example, perfective viewpoints focus on a situation as a whole while imperfective viewpoints focus only on part of a situation.

Smith’s definition of aspect is undoubtedly influential. This definition has, however, recently been challenged, notably by Klein, Li & Hendriks (2000: 730–731). Klein et al. claim that there are four problems with this definition of aspect:

- Problem A: The definition is entirely metaphorical;
- Problem B: Perfectivity does not reflect the ‘boundaries’ or the ‘boundedness’ of a situation;
- Problem C: Boundedness and the redundancy of *-le*;
- Problem D: ‘Realisation of the situation’ and *-le*.

Clearly, the first two problems are related to the received characterisation of aspect while the latter two are specific to Chinese aspect markers. Is this definition of aspect really wanting, or is it in fact adequate? As our aspect model builds on this definition, we think it appropriate, and necessary, to make clear our stance on these issues before we move on to present our model. In this section, we will only address the first two allegations while the language-specific problems will be discussed in section 4.1, where a systematic account of *-le* is presented.

Klein et al. (2000: 730) argue that the classical definition of aspect is “entirely metaphorical” because situations, unlike houses and little dogs, are abstract entities and cannot be *seen* at all. This argument, however, is not tenable, because, as Matthews (1990: 10–11) points out, viewing “means not merely seeing” as Klein et al. suggest, “but a mode of thinking.” When an addresser chooses a perfective aspect, like the English simple form, to present a situation “in its entirety” or “as a whole”, for example, the addressee can conceptually conjure up the whole picture of the situation, including its initial and final endpoints, and possibly also a duration if it has one. Hence, ‘conceiving’, ‘viewing’ and ‘presenting’ are useful terms when talking about an abstract, cognitive-semantic concept like aspect. As time is an abstract notion, the terms like ‘time of utterance’, ‘time of situation’ and ‘topic time’ proposed by Klein et al. (2000: 742–744) are also arguably metaphorical. They cannot be arranged in a sequence, or “contained” by each other like a larger box contain-

ing a smaller one. If the terms like ‘viewing’ are used metaphorically, the time-relational definition of aspect is also metaphorical. With that said, it is only fair to admit that human languages are elusive by nature. The metaphorical use of language is not a problem for the time-relational definition of aspect proposed by Klein et al. Yet neither is it a defect of Smith’s definition.

While “boundedness” has been a defining feature of perfectivity for generations of scholars before Smith (e.g. Dahl 1985:76), we agree with Klein et al. that perfectivity must not be conflated with the boundaries or boundedness of a situation. As we will see in section 2.4, the perfective/imperfective distinction is a central dichotomy of viewpoint aspect whereas boundedness is related to situation aspect. The two belong to different components of aspect that operate at different levels but interact with each other (cf. section 2.5). Yet we disagree with Klein et al. in that they conflate together how people describe the world and what the world itself is. According to Klein et al. (2000:730), it is “simply not true” to say that “verbs such as *sleep*, *watch* and *walk* typically refer to unbounded situations, whereas *die*, *run a mile*, and *bake a cake* refer to bounded situations”, because “in reality, with very few exceptions, all situations are bounded, or have temporal boundaries.” For example, the above authors use the sentence in (1a) to show that <Adam sleep> has a beginning and an end,² and hence is bounded “unless one assumes that Adam sleeps forever” (*ibid*:746).

- (1) a. Adam slept. (*ibid*:745)³
 b. Adam slept from two to four. (*ibid*:746)

It might be true that all situations “in reality”, as in the case of <Adam sleep>, have a boundary, but they must not be conflated with how language users describe these situations according to linguistic conventions (see section 2.3). The authors further argue that the situation in (1a) is just as bounded as in (1b) while the only difference is that (1b) has an explicit boundary specification whereas it is implied in (1a). But this argument is simply untenable. Borrowing their own terms, we can say that the ‘lexical contents’ of these two sentences are different, because “the term ‘lexical contents’ applies to all sorts of linguistic expressions” (*ibid*:747). The lexical contents of (1a) are <Adam sleep> whereas those in (1b) are <Adam sleep from two to four>. In our compositional account of situation aspect (see sections 3.3–3.5), (1a) is temporally unbounded (i.e. [–bounded], cf. section 3.2.5) while (1b) is bounded (i.e. [+bounded], cf. section 3.2.5). In (1b), the interaction of the core (i.e.

Adam slept) with the delimiting mechanism *from two to four* at the clause level resulted in a temporally [+bounded] situation. The argument of Klein et al. that in (1b), *Adam no longer slept after four (or did not sleep before two)* is only “a strong implicature” (*ibid.*:746) is also problematic. Given that the lexical contents of (1b) include an explicit specification of the time frame in which the situation is located, it is only natural that Adam only slept during this time span, i.e. from two to four. Otherwise, why does the speaker not say *Adam slept from one to seven* or for any other period of time instead? It might be possible to continue (1b) by *in fact, from one to seven* as the authors suggest, but the resulting sentence would sound quite odd, if it was felicitous at all. It is true that the speaker may correct himself/herself by continuing (1b) with *oh no, in fact, from one to seven*, but in this case, the first time frame is totally negated and a new one is specified. The correction does not entail the under-specification of the time frame in (1b). Hence, the second accusation against the received characterisation of aspect is also ungrounded.

As Smith’s view is that which is adopted by this book, albeit in a modified form, the next section outlines our version of the two-component aspect theory.

2.2. The two-component aspect model

We have so far agreed with Smith (1991, 1997) that situation aspect and viewpoint aspect are two independent but interacting components of aspect. As has been noted, the distinction between situation aspect and viewpoint aspect is recognised by many authors, though they use different terms (see section 2.1).

Situation aspect is composed of *inherent* features whereas viewpoint aspect is composed of *non-inherent* features of aspect (cf. Comrie 1976; Dorr & Gaasterland 1995). Their different natures provide a good reason to treat them as two independent components. In relation to viewpoint aspect, two basic definitions are needed – a definition of ‘achievement’ and the ‘experiential viewpoint’. Achievement can be informally defined as an instantaneous dynamic situation with a natural final endpoint (see section 3.3.2 for a formal definition). It is one of the situation types in Smith’s (1991, 1997) model. According to Smith (1997:82), in sentences like “*Bright Star*” *is winning the race*, the progressive focuses on an interval that is preliminary to the single

stage of the achievement event *win the race*, and the event itself is not included in the span of the progressive aspect. This argument, though, is not so convincing, as will be discussed later in this chapter. For the moment, we will allow Smith's definition to stand.

The experiential is one of the perfective viewpoints in Chinese which will be explored in more detail in section 4.2. The experiential "asserts a discontinuity between the final endpoint of the prior situation and the current state of affairs" (Smith 1997:82), this means that the span of the experiential viewpoint "must include the prior situation and a post-final stage not part of the situation itself" (*ibid*:83). As such, we know for sure from the utterance *tamen shang ge yue qu-guo Xianggang* "They went to Hong Kong last month" that they are no longer in Hong Kong.

With a working definition of achievement and the experiential aspect established, we can consider Smith's (1997:81–86) arguments in favour of the two-component model:

- (i) Some viewpoints may have a span that does not coincide with a situation. For example, the progressive may focus on the preliminary stages of an achievement and the experiential viewpoint in Chinese may include a post-final stage in its span. Both the preliminary and the post-final stages are not the situations themselves.
- (ii) No matter what viewpoint a situation takes, the situation type is always transparent. In *We were walking to school*, for example, situation type information is always semantically visible, that is, it has a natural final endpoint, even though the endpoint may never occur when the situation is presented with the progressive.
- (iii) Statives are linguistically different from the progressive. This is particularly true in Chinese because the progressive *zai* always occurs in dynamic situations (see section 5.2.2).
- (iv) Viewpoint aspect may function to trigger a shift in situation type (see section 3.4.3).

One-component approaches have been taken before in the research on aspect in both English and Chinese. Moens (1987), for example, conflates the two components of aspect in modelling aspect in English. However, Moens has to shoehorn 'habitual', 'consequent', and 'progressive' states, etc. into the category of *state* and yet barely discusses this complicated category. Zhang (1995) presents a contrastive study of aspect in English, Chinese and German.

While Zhang (*ibid*:21) claims that “it is neither necessary nor practical to separate aspect and *Aktionsart*”, yet the “unified approach” taken by the author can hardly explain, for example, why some aspect markers are incompatible with some situation types while other aspect markers show a preference for other situation types. The deficiencies in Moens and Zhang’s one-component aspect models also encouraged us to adopt the two-component model in our work as a general theoretical framework for the discussion of aspect. We will argue throughout this book, however, that Smith’s theory, while proceeding from a sound basis, develops a model of aspect which is nonetheless inadequate on several grounds.

First, situation aspect should be modelled at both the lexical level and the sentential level, but Smith (1991, 1997) is only concerned with situation types at the sentential level. This will be a focus of discussion in chapter 3.

Second, a final spatial endpoint should be kept distinct from a final temporal boundary, which means [\pm telic] is different from [\pm bounded]. This approach can better account for the compositional nature of situation aspect (see section 3.2). Smith, however, conflates these two types of final endpoints.

Third, Smith’s aspectual classification should be more fine-grained. For example, ‘individual-level states’ (ILSs) should be differentiated from ‘stage-level states’ (SLSs). With this distinction, the problem of felicitous co-occurrence of some states with the progressive and the imperative can be explained away easily (see section 3.3.3).

Fourth, rules for composition processes of situation aspect must be refined and tested with attested language data (see section 3.4), which Smith (1997) fails to do.

Fifth, Smith (*ibid*) suggests that both situation aspect and viewpoint aspect are universal. This runs contrary to the linguistic fact that situation aspect is language independent whereas viewpoint aspect is language-specific (see section 2.5).

Sixth, Smith’s (*ibid*) accounts of the perfective and imperfective aspects in Chinese, as well as the interaction between situation aspect and viewpoint aspect (see chapters 4–5), are inaccurate and incomplete.

Finally, the *neutral viewpoint* introduced specifically for Chinese in Smith (1997) is not a well founded construct in our view (see section 5.5).

The first five of these shortcomings of Smith’s work will be a major focus for discussion in chapter 3, with the final two points being discussed in chapters 4–5. Before proceeding with work that is partly critical of Smith, however, we

must emphasise that in spite of these defects, Smith's work is the departure point for the work that we have undertaken. As such we owe a great debt to Smith. Yet Smith's theory must be revised significantly to model aspect in Chinese. Therefore, our realisation of the two-component model differs from Smith's in many ways (cf. Figure 1.1).

Since terminology has been a problem area for aspect theory, let us state clearly that in this book we will minimise the use of new terminologies and borrow Smith's (1991, 1997) terms as far as we can so as to avoid further confusion. Note, however, that as our reworking of these notions progresses, the meanings that we attribute to these terms will inevitably shift from those that Smith attributes to them. For the purpose of this book, we refer to the aspectual information conveyed by the inherent semantic representation of a verb or an idealised situation as 'situation aspect', and the aspectual information reflected by the temporal perspective the speaker takes in presenting a situation as 'viewpoint aspect'. The term 'aspect' will be reserved as a cover term, encompassing both the internal temporal structure of a situation and its presentations, for the aspectual interpretation of a sentence, which is determined by the interaction between these two components.

Having defined the term aspect and justified the two-component approach, we will now explore situation aspect and viewpoint aspect in more detail. The purpose of this exploration is to pave the way for the development of the two-level model of situation aspect in chapter 3 and the discussion of Chinese viewpoint aspects in chapters 4–5.

2.3. Situation aspect: what to classify

Situation aspect is concerned with the aspectual classification of verbs and situations according to their temporal features. While we will elaborate our model of situation aspect in chapter 3, it is necessary to first establish the basis for this classification.

The temporal features such as 'dynamicity', 'durativity' and 'telicity' have long been recognised by language philosophers who attempted to establish typologies of lexical verbs based on these features (cf. Brinton 1988:5). These temporal features interact to determine the aspectual class of a verb or the type of a situation, explaining why situation and aspect have become linked. However, the classification of situation aspect remains an area of controversy.

The classification of situation aspect is almost as confusing and controversial as the definition of aspect itself. Such confusion mainly stems from the different parameters used for such classifications. Parameters vary simply because the targets being classified differ. Therefore, before a classification system can be established for use in this book, it is important to outline the basis of that classification.

There is a growing consensus in the literature that aspectual classification is related to how people describe the world rather than what the world itself is (cf. Smith 1997:6; Moens 1987:59; Molla-Aliod 1997:5; Brinton 1988:247; Galton 1984:25; Miller 1999:40; Lehmann 1999:43). This is an important observation, as it explains the focus of the theory developed in this book on determining aspectual features by linguistic tests as opposed to tests which involve factors beyond the language system itself. As such, the approach to aspect taken here is consonant with the views of Wittgenstein (1958:II, xi), in claiming that we can give different interpretations to the same object in the world. Smith (1997:6) also notes that situations may be presented with more than one viewpoint and situation type, according to speaker choice.⁴ Smith's (1997:xiii) key examples illustrate this point well:

- (2) a. John and Mary built a rock garden last summer.
 b. John and Mary were building a rock garden last summer.

Before considering the examples in detail, we need to define three key terms: 'event', 'situation' and 'state'. Following Comrie (1976:13), Mourelatos (1981:201) and Brinton (1988:23), we will use 'situation' to mean the entities in the real world codified by language. Although 'event type' and 'situation type' are frequently used interchangeably in the literature, they are used differently in this book. *Event* is used as a term for a dynamic situation in opposition to a *state*, and *situation* is preferred as a term inclusive of both *event* and *state*.

With these definitions in place, we can return to the examples under consideration. The situation described in these two sentences refers to the same building event, but is presented from different perspectives. (2a) presents the event in its entirety, implying that the garden was built to completion; in contrast, (2b) focuses only on the progressive part of the event with no information as to its completion.

On the other hand, one often finds in the literature that, when discussing the issue of aspectual classification, many authors use different terms. Some

relate aspectual classes to verbs, but others argue, reasonably, that the nature of the arguments and adjuncts of these verbs may also exert influence on their aspectual meanings (see section 3.4). In order to accommodate the compositional nature of situation aspect, some authors try to avoid such expression as “the aspect of a verb”, rather they use “predicate” or “predication” (e.g. Mourelatos 1981:199) to include both the verb, its object and temporal adverbial. However, we will argue, in chapter 3, that situation aspect is both a lexical-level and a sentence-level phenomenon. The terminological confusion has led some authors to simply use the all-inclusive term “aspect of a verb/VP/sentence” (e.g. Molla-Aliod 1997:5).

Returning to the basis of our aspectual classification, as noted we do not concern ourselves with real world situations but with linguistically described situations. To put it in Smith’s (1983, 1991, 1997) terms, what we classify is ‘idealised situations’,⁵ namely our idealisations of the structure of the situations occurring in the world.⁶

2.4. Viewpoint aspect: the perfective/imperfective dichotomy

Many characterisations have been posited in the literature concerning the perfective/imperfective opposition, but they can be grouped into three types: (1) perfectives view a situation as a whole from outside while imperfectives view it partially from inside; (2) perfectives view a situation as completed while imperfectives view it as ongoing; and (3) the perfective/imperfective distinction corresponds to the temporally bounded vs. temporally unbounded opposition. In the two-component aspect model, viewpoint aspect refers to different perspectives from which a situation is presented. As chapters 4–5 will present a systematic account of viewpoint aspect in Chinese, we will discuss viewpoint aspect in more general terms in this section.

Smith (1988:232, 1997:61) draws an analogy between viewpoint aspect and a camera lens, where viewpoint aspect functions like the lens that enables the speaker to present a situation from a particular temporal perspective. For example, perfectives focus on a situation as a whole whereas imperfectives focus only on a portion of its internal constituency. The contribution of viewpoint aspect (more specifically, perfective aspect) is similar to the telicity feature of situation aspect (see section 3.2.3). The perfective/imperfective distinction, as Comrie (1976) suggests, can be viewed as the sentential repre-

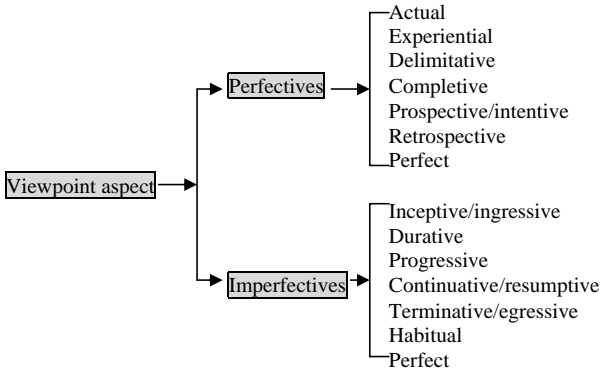


Figure 2.1. Viewpoint aspect

sentation of what is encoded semantically by telicity values, though it should be kept in mind that viewpoint aspect actually adds independent meaning to a sentence.

The perfective/imperfective dichotomy is a central opposition in viewpoint aspect. As noted in section 2.1, the perfective/imperfective distinction derived initially from studies of Slavic languages, and the term aspect was originally only related to what we call viewpoint aspect. In Russian, as in all Slavic languages, most verbs have two morphological forms that represent two different ways of viewing a situation – as perfective or as imperfective. The distinction between perfective and imperfective is a basic opposition in many languages (cf. Bybee 1985; Dahl 1985, 1999:33; Frawley 1992). Dahl (1985: 69–72), for example, finds in his study of 64 languages that this opposition occurred in 45 languages. While Chinese draws productive and overt distinctions between these two viewpoints, English does not have a productive morphological distinction between these (cf. Siewierska 1991:120) and “relies on other grammatical and semantic phenomena, like tense, to encode this aspectual distinction” (Frawley 1992:296).

While the perfective/imperfective dichotomy is the focus of our interest in this book, it is appropriate to discuss some secondary oppositions of viewpoint aspect. Frawley (1992:294–335) discusses six major aspects (perfective vs. imperfective, telic vs. atelic, punctual vs. durative, iterative vs. semelfactive, progressive and habitual) and five minor aspects (inceptive, terminative, prospective, retrospective and intensive).⁷ But of these, distinctions between telic and atelic, between punctual and durative, and between iterative and

semelfactive are clearly related to situation aspect (see section 3.2). In our analysis, the central opposition of the perfective and the imperfective subsumes all of the remaining viewpoint aspects, as shown in Figure 2.1.

Under the label of perfectives, the actual viewpoint simply signals the actualisation or realisation of a situation and presents it in its entirety. The experiential viewpoint is a mental aspect that emphasises the idea that something has been experienced prior to a particular reference time; the delimitative viewpoint indicates that a situation lasts for a brief period; the completive viewpoint emphasises that an event has come to its completion. These four viewpoints are prominent in Chinese and will be discussed in chapter 4. The prospective aspect encodes a point just prior to the beginning of a situation and signals that the situation itself is yet to come. With this viewpoint, a situation is presented as an unanalyzed whole and no reference is made to its internal structure. The retrospective aspect is similar except that it encodes a point immediately subsequent to the final endpoint of a situation and signals that the situation has ended. In English, the retrospective viewpoint is marked by the simple past.

Under the label of imperfectives, the inceptive (ingressive) viewpoint focuses on the initial endpoint of a situation, and the durative aspect focuses on the durative segment of a situation while the terminative (cessative, egressive) viewpoint focuses on the final endpoint of a situation,⁸ and the continuative (resumptive) viewpoint focuses on the continuative stage following a definite temporal point between the initial and final endpoints of a situation. The progressive viewpoint signals the ongoing nature of the situation it presents. As these viewpoints decompose a situation and focus on only one part, they are all imperfective in nature. The habitual viewpoint refers to a situation that is protracted over a long period, or a situation that occurs so frequently during an extended period that the situation becomes characteristic of the whole period (cf. Harrison 1996). As the terminative viewpoint and the habitual viewpoint are not marked in Chinese, only the inceptive, durative, progressive and continuative viewpoints will be discussed in this book (chapter 5).

The perfect aspect is not monolithic. There are sub-categorisations of perfectivity that are possible. According to Comrie (1976: 56), there are four types of perfect: the perfect of result, the perfect of experience, the perfect of recent past and the perfect of persistent situation. The first three categories are perfective while the last is imperfective in nature.

The perfect as a viewpoint aspect differs from other aspects in that it relates

a previous situation to the present, i.e. indicating the current relevance of a previous situation. Chinese does not have perfect constructions. While the change-of-state (COS) *le* (see section 4.1.7) also indicates the current relevance state (CRS) (cf. Li & Thompson 1982), it is not restricted to the present. Rather the COS *le* can indicate the current relevance of a situation relative to a past, present, or future time reference. A further contrast between the perfect in English and the COS *le* in Chinese lies in the fact that, on the one hand, the perfect can carry the experiential meaning whereas *le* cannot, and on the other hand, *le* can refer to an imminent change of state (cf. section 4.1.7) whereas the English perfect cannot. When a sentence takes both the actual *-le* (see section 4.1) and the COS *le*, it is translatable by the perfect of persistent situation (cf. also Henne et al. 1977: 113), because the COS *le* in combination with the actual *-le* denotes a previous situation continuing into the present.

The perfect is an aspect in a rather different sense from other viewpoint aspects (cf. Comrie 1976: 52). It refers to a state resulting from a single event that took place in the past (Comrie 1981: 73). As a result, the simple perfect (see section 6.1) is often, but not always perfective (cf. Mourelatos 1981: 195), as shown in (3):

- (3) a. He has arrived. (PFV)
 b. He has been to Australia. (PFV)
 c. He has lived here all his life. (IPFV)

A complete situation normally consists of three internal phases: beginning (the initial endpoint), middle (the duration) and end (the final endpoint) (cf. Comrie 1976: 18). When a situation is viewed from an external perspective, it is gathered in its entirety. In other words, the situation is regarded as a non-decomposable whole with no further differentiation provided for its internal temporal structure. In this case, we say that the situation is viewed *perfectively*. Comrie (1976: 16) provides a useful definition of perfectivity: “Perfectivity indicates the view of a situation as a single whole, without distinction of the various separate phases that make up that situation.” Comrie’s definition is tantamount to saying that perfectivity means holisticity, the approach adopted in this book. However, two incorrect characterisations of perfectivity can readily be found in the literature. One is the confusion between completeness and perfectivity (e.g. Smith 1988, 1997; Christensen 1994; Chao 1968), the other is the confusion between boundedness and perfectivity (e.g. Zhang 1995; Huang 1987).

The first confusion is best exemplified with reference to Smith (1991, 1997). Although Smith (1988:230, 1997:62, 66) also defines perfective viewpoints as focusing on “the event as a whole, taking an external perspective” – a definition similar to Comrie’s (1976), she is actually brushing aside her own definition and identifying perfectivity with “the type of boundedness” (Smith 1988:218), i.e. *completion* or *termination* (see section 4.1.2). Therefore, in her discussions of Chinese perfective viewpoints (Smith 1988; 1997:263–271), she is involved in an attempt to differentiate between “a completive perfective” and “a bounded perfective” (Smith 1988:236) rather than treating the perfective aspect as “a camera lens, allowing a certain view of an event” (Smith 1988:230). In order to resolve this contradiction, Smith argues that perfectives “may emphasise completion or termination rather than the occurrence of an event as a whole” (Smith 1997:72–73). In doing so Smith is clearly contradicting her own definition of perfectivity by conflating two different characterisations of the perfective/imperfective dichotomy as noted at the beginning of this section.

The confusion between perfectivity and completiveness, however, does not start with Smith. As Comrie (1976:18) notes, “[a] frequent characterisation of perfectivity is that it indicates a completed action.” The focus on the closure type of a situation, however, puts too much emphasis on the end of the situation, because “indicating the end of a situation is at best only one of the possible meanings of a perfective form, certainly not its defining feature” (Comrie 1976:19). In contrast, perfectivity “puts no more emphasis, necessarily, on the end of a situation than on any other part of the situation, rather all parts of the situation are presented as a single whole” (Comrie 1976:18). As such, we argue that *complete* does not mean *completion*, nor does *incomplete* mean *noncompletion*. The perfective construes a situation as *complete*, not as *completed*. The perfective/imperfective distinction is independent of the closure type of a situation.

The second confusion is best explained with reference to Zhang (1995). According to Zhang (*ibid*:114), “perfectivisation or imperfectivisation [...] is based on the conceptual process of bounding and unbounding.” In other words, perfective and imperfective notions are considered as “linguistic representations of the aspectual conceptualisations of boundedness and unboundedness” (Zhang *ibid*:117). Situations that have properties of boundedness are perfective while those that have properties of unboundedness are imperfective

The imperfective viewpoint, on the other hand, views a situation “from within” and presents it as incomplete, with explicit reference to its internal temporal structure (cf. Comrie 1976:24). This means that with the imperfective viewpoint, only part of a situation is presented. Smith (1997: 127) makes the following characterisation of this viewpoint: “The viewpoint Imperfective is located at interval I; with the condition that for all times *t* in I, an interval of the situation *S* obtains, and there is no time at which the endpoints of *S* obtain.” Smith’s characterisation seems to suggest that both the initial and the final endpoints should be excluded, but all of the other parts can be focused on by the imperfective viewpoint. Thus in Smith’s (1991) account, any of the three stages before the initial endpoint, after the final endpoint and between these two endpoints can be focused on. While the unmarked imperfective presents the stage between two endpoints, two marked imperfectives focus on the stages prior to the initial endpoint and beyond the final endpoint, as illustrated below:

- (2.3a) unmarked imperfective: I.....//////////.....F (ibid: 111)
 (2.3b) resultative imperfective: I.....F ////////// (ibid: 116)
 (2.3c) preliminary imperfective: //////////I.....F (ibid: 225)

Figure 2.3. Smith’s schemata of imperfectives

The schemata show that the unmarked imperfective refers unmistakably to the progressive, which focuses on the durative part of a situation without reference to its endpoints, as in *John was writing a letter*. Resultative imperfectives, according to Smith (1997: 76), “present a state that follows the final endpoint of a telic event.” This marked imperfective is mainly associated with the durative marker *-zhe* in Chinese (see section 5.1), e.g. *ta zai chuang shang tang-zhe* “He is lying on the bed”. The preliminary imperfective, on the other hand, is introduced to account for the felicitous co-occurrence of English achievements with the progressive, i.e. the progressive presents the preparatory process of an achievement. However, the validity of these two marked imperfectives is arguable, because the stages located prior to the initial endpoint and beyond the final endpoint are *external* rather than *internal* to the temporal structure of a situation. More precisely, they belong to different situations. It definitely runs contrary to Smith’s own definitions of aspect and viewpoint aspect to include these stages as the internal temporal structure of a

situation. Furthermore, the imperfective *-zhe* in Chinese signals the *durative* aspect rather than presenting the resultative state (see section 5.1.2). In addition to the stage between the endpoints of a situation, data in Chinese shows that imperfectives can also focus on the initial endpoint (i.e. the *inceptive* viewpoint signalled by *-qilai*, see section 5.3), or the continuative stage following a definite internal point (i.e. the *continuative* viewpoint marked by *-xiaqu*, see section 5.4). However, the final endpoint is normally excluded, therefore imperfective viewpoints are open informationally.

2.5. Aspect: two components, two levels

Situation aspect is basically a cognitive-semantic concept while viewpoint aspect is a grammatical concept. The basis for natural language semantics is “the conceptual system that emerges from everyday human experience” (Sweetser 1990:1; cf. also Frawley 1992:331). As such, one must refer to ‘viewing’, ‘conceiving’, and ‘conceptualising’ in speaking of aspect (cf. Matthews 1990:10–11; see also section 2.1). Consequently, verb classes, situation types and the classification system of situation aspect show great similarities cross-linguistically (cf. also Peterson 1997).⁹ As such, Smith (1997:17) is able to talk about situation types “at an abstract level that holds across languages.” Zhang (1995:41), on the basis of a contrast between English, Chinese and German, finds that verb categories in the three languages express the same basic situations (e.g. ‘states’, ‘activities’ and ‘achievements’). It is the interplay between verb categories and “other grammatical categories” (e.g. viewpoint aspect) that leads to aspectual distinctions. As we will see in sections 3.3–3.5, situation aspect in Chinese and English shows a great similarity at both the lexical and the sentential levels. This is in spite of the fact that our model does indicate some cross-linguistic differences between English and Chinese. For example, the entailment test for telicity works well in English but not in Chinese (see section 3.2.3); rule 6 governing the prepositional phrase of a goal only applies in English (see section 3.4.2); passives in English and Chinese also demonstrate some difference in their effect delimiting a situation (see section 3.4.3). These differences, nevertheless, are not inherent in situation aspect. Rather, they are related to “other grammatical categories.” Therefore, while the six verb classes (see section 3.3) and eleven situation types (see section 3.5) manifest, and are determined by, the same five distinguishing features (see

section 3.2), linguistic tests for these features may vary across languages because different languages vary in linguistic forms, and grammatical categories in different languages may show their own features (consider the actual *-le* and the English simple past, as will be discussed in section 3.4.3).

Viewpoint aspect, on the other hand, varies significantly between languages, because it is primarily a grammatical concept, and grammars vary across languages. Bybee, Perkins & Pagliuca (1994: 300), for example, observe that grammatical categories like perfectives demonstrate “many language specific differences.” Therefore, while viewpoint aspects such as the perfective and the imperfective may have more or less the same or similar function cross-linguistically (cf. section 2.4), their forms may differ radically. For example, although perfectives in both English and Russian construe a situation as a whole, the English perfectives take the non-progressive form whereas their Russian counterparts take the form of derived prefixed verbs (cf. Miyahara 1996: 182). In Chinese, as we will see in chapter 4, perfective aspect markers include *-le*, *-guo*, verb reduplication and RVCs. While these viewpoints all present situations perfectly, they have their own focuses.

It is clear that the two components of aspect operate at two different levels but interact with each other to determine the aspectual meaning of an utterance. Situation aspect operates at the semantic level while viewpoint aspect operates at the grammatical level. This difference determines that situation aspect is language independent whereas viewpoint aspect is language specific (cf. Xiao & McEney 2002).

Having presented the two-component aspect model to be used in this book, we can now proceed to discuss aspect in Chinese. Let us first consider situation aspect.

Notes

1. In the literature, the word *aspectual* is sometimes found to be used as a term covering both viewpoint or perspectival aspect and *Aktionsart* (e.g. Brinton 1988: 4). However, in this book, we will use this word only as the adjectival form of *aspect*.
2. Klein et al. use angled brackets to indicate the ‘lexical contents’ of a sentence. See the discussion below.
3. All numbered examples in this book are cited from our corpora, either directly or in a modified form, unless indicated otherwise. It should be noted that modified examples may NOT necessarily be grammatical or acceptable. A citation from corpora or other sources is

typically modified in this book to (1) provide an unacceptable example, or (2) to form a more marked contrast with other examples. An *in/for*-PP, which does not appear in the original text, may appear in brackets in an example. It is included as a test for the telicity value of a situation.

4. Siewierska (1991:117) quotes Majewicz's (1985) pair of examples to show that the same situation can be "presented from different internal temporal perspectives." While we agree with her observation, we differ in that perspectives such as perfectives and imperfectives are treated in this book as *external* viewpoints to present the internal temporal structure of a situation.

5. Galton (1984:25) also argues that the distinction between aspectual classes is not a "distinction inherent in what is going on", but rather a distinction between different ways it is described. Readers can refer to Smith (1997:6–7) for a discussion of the relationship between the real world situation and the idealised situation.

6. Siewierska (1991:43) argues that "SoAs (i.e. 'situations' in this book) are taken to represent not patterns of experience as they exist in the real world, but rather the codified view of reality built into the grammar of a language"; Miyahara (1996:184) argues to the same effect: "aspect expresses not events themselves, but a state of events at the time when they are grasped by the speaker."

7. Intensive aspect indicates that "an event is magnified or performed with a degree of intensity or rate that is greater than normal" (Frawley 1992:323). But we do not think that it has anything to do with the temporal shape of a situation and thus it is excluded in our model.

8. The terms 'ingressive' and 'egressive' are frequently restricted to stative situations (cf. Frawley 1992:321), that is, "to come into" or "go out of" a stative situation.

9. Similar views can be found in an EAGLES report (available online at URL: <http://www.ilc.pi.cnr.it/EAGLES96/rep2/node6.html>).

CHAPTER 3

Situation aspect

While chapter 2 is concerned with the two-component aspect theory, we will, in this chapter, develop a two-level model of situation aspect in which situation aspect is modelled as ‘verb classes’ at the lexical level and as ‘situation types’ at the sentential level.¹

At the lexical level, we use a five-way classification system, established in section 3.2, to classify situation aspect into six verb classes (section 3.3). These verb classes constitute the lexicon of our two-level model of situation aspect. At this level, verbs alone are considered. An essential concept that enables us to do this is that of ‘neutral context’. For the moment, it suffices to say that a neutral context is a simple clause in which everything that might change the aspectual value of a verb is excluded, though we will refine this definition in section 3.3.

Sentential-level situation aspect is the composite result of the interaction between verb classes and complements (e.g. *push the door open*), arguments (e.g. *cooked the turkey*) and non-arguments such as peripheral adjuncts (e.g. *read the book for 10 minutes*) and viewpoint aspect (e.g. *Mary was singing a song when she died*, Comrie 1976:47). According to van Valin (forthcoming), there are three levels of syntactic units of the layered structure of the clause (LSC), namely, ‘nucleus’, ‘core’ and ‘clause’. These correspond to the three levels of semantic units: predicate, predicate plus arguments, and predicate plus arguments as well as non-arguments. The three levels of the LSC that van Valin proposes for his *Role and Reference Grammar* (RRG) is a useful point of departure for us to explore the composition of situation aspect at the sentential level. In our model, the sentential level composition of situation aspect takes place at the three levels of syntactic units. The interaction between verbs and other sentential constituents (i.e. complements, arguments and non-arguments) is governed by a set of rules that map verb classes at the lexical level onto situation types at the sentential level.

It should be noted, however, that while situation aspect is modelled at the lexical and sentential levels in our analysis, the same classification system applies to both verb classes and situation types. With a framework consisting

of a lexicon, a layered clause structure and a set of mapping rules, our model of situation aspect was developed and tested with data from an English corpus and a corpus of Mandarin Chinese. Before we present our new model, however, it is appropriate to review previous proposals, which will be done in section 3.1.

3.1. Previous studies of situation aspect

While this book has a focus on aspect in Chinese, as noted in chapter 1, previous studies on aspect in Chinese are largely limited to viewpoint aspect, i.e. aspect markers. Existing models of situation aspect in Chinese are based on models in English (e.g. Tai 1984). Furthermore, situation aspect is basically language independent (see section 2.5). Hence the review in this section focuses on models of situation aspect in general rather than specific to Chinese.

While the earliest literature on aspectual classification dates as far back as Aristotle, modern approaches to situation aspect are normally considered to start with Vendler (1967), who proposed a four-way aspectual classification based on the verb classes ‘STAtE’, ‘ACTivity’, ‘ACComplishment’ and ‘ACHievement’ as well as linguistic criteria to differentiate between these verb classes. Vendler’s four verb classes can be differentiated using three binary features: [\pm DYNAMIC], [\pm DURative] and [\pm TELIC] (cf. Shirai 2002:456), as shown in Table 3.1.

Table 3.1. Vendler’s four verb classes

Class	[\pm dyn]	[\pm dur]	[\pm telic]	Examples
STA	–	+	–	know, love, believe, possess
ACT	+	+	–	run, walk, swim, push a cart
ACC	+	+	+	run a mile, walk to school, paint a picture
ACH	+	–	+	recognise, spot, find, lose, reach, win

As can be seen in Table 3.1, Vendler’s analysis basically works at the lexical level (cf. Verkuyl 1993:33), though it also involves predicates rather than simply verbs alone. As such, Vendler has to put *run* and *walk* under the category of activity and put *run a mile* and *walk to school* under the category of accomplishment. With the three traditional parameters alone, a double entry

for the same verb in the lexicon is inevitable, thus making the lexicon unnecessarily large. Furthermore, Vendler's verb-based approach not only obscures the fact that we are talking about a single verb (cf. Lys & Mommer 1986:216), it is also inadequate as an account of temporal meanings arising from arguments and non-arguments (e.g. *read* vs. *read a book*) (cf. section 3.4). Yet Vendler's (1967) quadripartite analysis, though having weaknesses, has been very influential and has been accepted as a useful starting point in the study of aspect by many authors (e.g. Verkuyl 1989; Mourelatos 1981; Moens 1987; Smith 1997; Carlson 1981).

To date, however, the reinterpretations of Vendler have led to models which, while they may deal with some issues effectively, simply generate others. Mourelatos (1981), for example, uses Kenny's (1963) partial ordering tree to reconstruct Vendler's verb classes. Mourelatos' reconstruction is captured in Figure 3.1. The corresponding Vendlerian classes are given in brackets for the ease of comparison. As can be seen, Mourelatos' main partition involves the first two levels: 'states', 'processes' and 'events'. Mourelatos draws an analogy between the 'count feature' of situations and the mass-count distinction in nouns (Mourelatos 1981:204). While states and 'occurrences' (processes and events) can be differentiated on the basis of $[\pm\text{dynamic}]$, the two types of occurrences are different in that events can be counted whereas processes cannot. In order to correct Vendler's (1967:115) classification of *see* as in *I saw him run/cross the street* as a state, Mourelatos (1981:200) proposes collapsing Vendler's accomplishments and achievements into one category: events. In his analysis, therefore, the third-level distinction is at best a secondary distinction. Thus, while events are further divided into developments and punctual occurrences according to their temporal lengths, processes are not. However, as we will see later in this section and also in section 3.2.2, $[\pm\text{durative}]$ is indeed an important parameter for aspectual classification. In our analysis, *see* in Vendler's example is still an achievement verb, no matter how protracted *what was seen* (i.e. his running/crossing the street) may be, because what was seen, the idea expressed by 'small clauses' (i.e. *him run/cross the street*, Aarts 1992), should be taken as a whole. Thus, in *I saw him cross the street in three seconds*, the *in*-PP is related to *his crossing the street* rather than *my seeing*.

A further problem with Mourelatos' classification is that he places 'split-second events' like *blink* and *hit*, together with Vendler's achievements under the label of punctual occurrences. This conflation cannot account systemati-

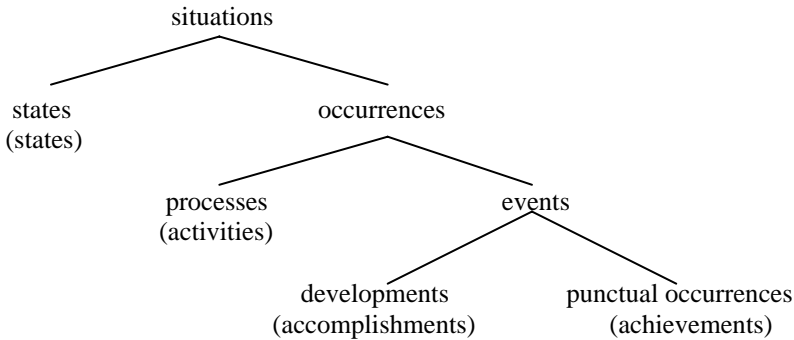


Figure 3.1. Mourelatos' aspectual classification

cally for the distinction between the two types of punctual events (see sections 3.3 and 3.5). Let us examine the following examples. If we say *He was winning the race*, can we say that he won the race? On the other hand, if we say *He was blinking*, can we say that he blinked? The answers to the two questions are obviously different. In our model, 'split-second events' such as *blink* and *hit* form a separate aspectual class, namely 'semelfactives' (see sections 3.3 and 3.5 for a further discussion of semelfactives).

Mourelatos (1981:199), however, does identify, unlike many other works, the effect of sentential constituents on situation aspect, namely, the inherent features of verbs, the nature of arguments (though he incorrectly includes external arguments, see section 3.4.2), adverbials, viewpoint aspect and tense (see the discussion of 'neutral context' in section 3.3).

Vendler's attempt to classify surface verbs once and for all is clearly infeasible (cf. Dowty 1979:62), as situation aspect is also a sentence-level phenomenon (cf. Verkuyl 1993; Smith 1997). While Vendler was aware of the contributions of arguments to verb classes, it was Verkuyl (1993) who elaborated the compositional nature of situation aspect in a systematic way. However, Verkuyl's (1989, 1993) approach to aspectual classification is also problematic. In his analysis, the feature $[\pm\text{durative}]$ (see section 3.2.2) is not linguistically significant. Verkuyl gives a typewriting example to argue against Vendler's distinction between achievements and accomplishments:

[...] in modern technology the reverse argument is also possible in two respects: (a) the typing of the letter *p* on the screen of a word processor can take a while due to some *Please Wait* command so that it takes time before the *p* has become visible and has been typed out; (b) the typing of a business letter may take a moment: if it is standard, it can be produced by hitting one

single key. If things are going that quickly it would mean that both *type a letter* and *type a (business) letter* are members of one and the same category and that they manifest themselves as either Achievement terms or Accomplishment terms dependent on something which has nothing to do with language itself. (Verkuyl 1989: 56–57)

While situations in the real world may be just as Verkuyl suggests, it should be noted that we are actually classifying the *linguistic expressions* of these real world situations instead of the real world situations *per se* (see section 2.3; cf. also Siewierska 1991: 232). Thus, an event like John's arrival may take several seconds or even a couple of minutes (he may have to park his car, walk towards the door, and then press the doorbell), yet we cannot say this event is durative because of this passage of time. In contrast, an event like John's writing a letter may take only a brief moment or may take as long as a few days, depending on the length and complexity of the letter. Yet we cannot say the letter-writing event is punctual if it only takes a brief moment. The reason for this is that when we discuss aspectual classification, we are actually talking about linguistic conventions rather than real world situations.² As Bach (1981: 15) suggests, our linguistic inquiry into ontological presuppositions should concern only those that can be found in our understanding of the world as it is reflected in linguistic categories (cf. also Shirai & Andersen 1995: 744). Link (1983: 303) also argues that "our guide in ontological matters has to be language itself." The pragmatic approach taken by Verkuyl implies that the difference between [+durative] and [-durative] situations is quantitative, that is, there are short accomplishments and long achievements. But in fact the qualitative difference between the two cannot be eliminated, because achievements are conceived as filling or taking up no time at all. That explains the ill-formedness of **John reached the summit for a split second*.

Furthermore, some of Verkuyl's (1989, 1993) rules mapping verbs onto situation types, e.g. the effect of external arguments, are incorrectly postulated. Verkuyl (1989: 80), for example, uses the examples in (1) to argue that subject NPs also contribute to situation aspect:

- (1) a. Soldiers played that sonata. (Verkuyl 1989: 80)
 b. Adults hated that sonata. (*ibid*)
 c. Nobody hated sonatas. (*ibid*)

According to Verkuyl (1989: 81), sentences in (1) are [-telic] (or [-T] in his own terms) because they "have subject-NPs with a minus value" of the feature *B*, i.e. bare plurals or mass nouns. Verkuyl argues that when a sentence has a [-

B] subject NP, the aspectual value of the sentence (S-aspect) is [-telic] no matter whether the verb phrase (i.e. VP-aspect, including internal arguments) is [+telic] or [-telic], thus

- (2) a. Subject-NP_[-B] + V_[+T] ⇒ Sentence_[-T]
 (e.g. 1a-b) (*ibid*:81)
- b. Subject-NP_[-B] + VP_[-T] ⇒ Sentence_[-T]
 (e.g. 1c) (*ibid*:81)

Verkuyl is right to argue that (1b) and (1c) are [-telic], but his explanation of why this is the case is not convincing at all. The two situations are atelic simply because *hate* is a [-telic] verb. Atelic verbs always produce atelic situations, disregarding the nominal feature of internal or external arguments (see section 3.4.2). Example (1a) is slightly more complicated because of the bare plural *soldiers*. In isolation, this example is ambiguous between an episodic/existential reading (i.e. on one occasion a group of soldiers played that sonata) and a habitual/generic reading (i.e. soldiers in general used to play that sonata) (cf. Diesing 1992; see section 3.4.2 for a further discussion of the existential vs. generic distinction in bare plurals).³ Example (1a) is [-telic] only in its generic reading, which denotes a habitual state. In the existential reading, however, when a speaker says *Soldiers played that sonata*, she/he must have in mind a particular group of soldiers, for example, a group of soldiers at a party in a club, rather than soldiers in general. This means that *soldiers* in (1a) is [+B] (or [+count] in our model), and therefore, in our analysis, (1a) should be [+telic], because (1a) will certainly pass the entailment test: *Soldiers were playing that sonata* does not entail *Soldiers played that sonata*. It is true that (1a) can take a durative adverbial like *for 5 minutes* (see section 3.2.3) felicitously (i.e. *Soldiers played that sonata for 5 minutes*). In this case, the revised sentence is indeed [-telic]. But the aspectual shift is attributable to *for 5 minutes* because a *for*-adverbial can delimit a telic situation and coerce it into an atelic situation at the clause level (see section 3.4.3). In fact, while a *for*-adverbial does not usually pair with a telic situation, it is not difficult to find instances of this co-occurrence. Consider the example in (3):

- (3) For a second, a slightly wounded expression crossed Neil's face [...]

The situation *a wounded expression crossing Neil's face* in (3) is [+telic] at the core level (see section 3.4.2). But when the sentence takes *for a second*, it is coerced into a 'bounded activity' (see sections 3.4.3 and 3.5) at the clause level.

Therefore in (3), the accomplishment *cross Neil's face* may not have achieved its final endpoint, i.e. the wounded expression was not expressed fully on Neil's face within the specified time frame. For the moment, let us leave the issue of external arguments to one side and focus instead on another influential aspect model, that of Smith (1997). However, we will return to the issue of external arguments in section 3.4.2.

In contrast to Vendler's verb-based approach, Smith (1997) focuses her aspectual classification directly on idealised situations at the sentential level. Smith (1997) presents a quintapartite analysis of situation aspect based on the three traditional aspectual parameters. The [\pm dynamic] feature distinguishes states from all other situation types. The [\pm durative] feature further divides non-statives into two groups: activities and accomplishments vs. achievements and semelfactives. Finally the [\pm telic] feature further differentiates between activities and accomplishments on the one hand, and between semelfactives and achievements on the other hand. Table 3.2 is a feature matrix system of Smith's situation types with her own examples.

Table 3.2. Smith's (1997) situation types

Situation	[\pm dynamic]	[\pm durative]	[\pm telic]	Examples
STA	-	+	*4	know the answer, love Mary
ACT	+	+	-	laugh, stroll in the park
ACC	+	+	+	build a house, walk to school
SEM	+	-	-	tap, knock
ACH	+	-	+	win the race, reach the top

Smith's classification does not appear to differ much from Vendler's. The only noticeable difference is that semelfactives are separated from Vendler's activities to reflect the distinction between achievements and accomplishments. Conceptually, however, Smith's reconstruction is significant. As noted earlier, a striking feature of Vendler (1967) is that he confined his partition to the lexical level as "what he really did is to propose ontological categories" (Verkuyl 1993:33). In contrast, Smith (1997) is aware of the compositional nature of situation aspect, therefore her aspectual classification is not concerned with verbs. Rather it focuses directly on idealised situations at the sentential level. In Smith's own terms, situation aspect is related to 'verb constellations' (cf. Smith 1997:17). Smith (1997:54–55) also suggests some rules to govern the interaction between verbs and arguments in the composi-

tion process of situation aspect. However, her rules are only concerned with NP and PP-arguments. Furthermore, as she has not established an aspectual classification of verbs at the lexical level, these rules cannot be applied easily, if at all. As Lys & Mommer (1986:218) argue, “unless a system of verb classification is also set forth, many generalisations will be missed.”

Tai (1984) proposed a three-way aspectual classification of verbs in Chinese: states, activities and results. While his model is based on Vendler (1967), Tai (*ibid*:289) sought to “focus on differences rather than similarities between Chinese and English.” The prominence of resultative constructions in Chinese led him to combine Vendler’s accomplishments (his “resultative verb compounds”) and achievements (his “resultative simple verbs”) into a single category of results. However, as his discussion of the closure type resulting from the interaction between verb classes and *-le* shows (see section 4.1.2), Tai’s classification is also arguably problematic.

As can be seen from the above discussion, none of the analyses discussed so far provides an adequate classification of situation aspect. Our two-level approach to modelling situation aspect is primarily motivated by the deficiencies inherent in these analyses. The Vendlerian approach works well at the lexical level, but not at the sentential level. Conversely the approach of Smith works well at the sentential level but not at the lexical level. Our two-level approach to situation aspect seeks to bridge this gap, operating at both the lexical and sentential levels. Moens’ failure to give an adequate account of his complicated category of state has led us to treat viewpoint aspect as an independent yet interacting component of aspect theory. Verkuyl’s elaboration of the compositional nature of situation aspect has encouraged us to elaborate detailed rules mapping verb classes at the lexical level onto situation types at the sentential level.

3.2. The classification system for situation aspect

The first step in modelling situation aspect is to establish a classification system (cf. Vendler 1967; Smith 1997; Verkuyl 1993). The selection of parameters, however, needs to be undertaken with regard to a defensible rationale. This book claims that the relevant distinguishing features should not only make a clear distinction between various types of verbs and situations, they should also facilitate an explanation of the interaction between situation

aspect and viewpoint aspect. In approaching the development of the classification system, this book will build upon the three established parameters, [\pm dynamic], [\pm durative] and [\pm telic] (e.g. Comrie 1976; Smith 1997) and add two new features, [\pm result] and [\pm bounded] to complete our classification system.

3.2.1 [\pm Dynamic]

[\pm Dynamic] is a feature that distinguishes two basic types of situations in human languages: events and states. This feature is generally given priority over other parameters to serve as the central criterion for the initial level distinction of situation aspect (e.g. Smith 1997: 19; Brinton 1988: 57). A stative situation has no internal phases and involves no change; it may endure or persist over time and it remains steady for an undefined period unless a dynamic situation occurs to change it.⁵ Consequently, states normally do not *happen*, nor can they be *done*; they simply obtain or hold as an undifferentiated and homogeneous moment (e.g. *believe*). In contrast, a dynamic situation necessarily involves change over time. The change can be related either to its heterogeneous internal structure (e.g. *dance*) or to its changing endpoints (e.g. *die*).

Comrie (1976) proposes an intuition-based semantic test to differentiate between [+dynamic] and [–dynamic]. According to Comrie, the two types of situations are different in terms of internal effort. Situations like *to work in the garden* and *to run a mile*, which require some effort, are [+dynamic]. Even an apple falling down from a tree consumes some energy, because it falls as a result of gravity. Thus,

With a state, unless something happens to change that state, then the state will continue [...] With a dynamic situation, on the other hand, the situation will only continue if it is continually subject to a new input of energy [...] To remain in a state requires no effort, whereas to remain in a dynamic situation does require effort, whether from inside [...] or from outside. (Comrie 1976: 49)

One of the linguistic tests that has been extensively adopted to determine dynamicity is the progressive test proposed by Vendler (1967). The progressive only applies to situations that have successive stages, as in (4a). As states are homogeneous and do not have successive stages,⁶ they are normally incompatible with the progressive, as shown in (4b):

- (4) a. Yvonne was moving about upstairs.
 b. *She was knowing the answer.

It has been argued that stative situations are excluded from the progressive because their meaning is already necessarily continuous by nature, and the progressive would be superfluous (Galton 1984:71). However, as Verkuyl (1989:36) observes, the progressive test has been questioned by many linguists (e.g. Leech 1971:1–27; Comrie 1976:37f; Dowty 1979:184; Vlach 1981:279ff; Mourelatos 1981:196; Klein 1994:34), because the following examples are all felicitous:

- (5) a. He is being ill. (Leech 1971:14)
 b. Max is being a fool. (Carlson 1977:448)
 c. I'm living at 6 Railway Cuttings. (Comrie 1976:37)
 d. John is knowing more and more about thermodynamics.
 (Moens 1987:136)

Nevertheless, although it is possible to find stative verbs occurring with the progressive, the intuition underlying Vendler's observation is, in our view, correct, though Vendler's observation should be expressed as "stative verbs do not need a progressive auxiliary in contexts where other verbs do" (Moens 1987:136; cf. also section 5.2). For example, if you see a man walking in the park and you know that he is the president of GM, you can only say *The man who is walking over there is the president of GM*, but not **The man who walks over there is the president of GM*, because the latter sentence must be interpreted as habitual. Stative verbs, however, do not take the progressive in such contexts. Thus you can say *The man is the president of GM* or *The man believes in ghosts* (cf. Moens: *ibid*).

The progressive test appears reliable in Chinese,⁷ where the progressive aspect marker is *zai* (see section 5.2). Of the 88 instances where the progressive *zai* appears in the Weekly corpus, 86 denote dynamic situations and two are special cases of stative situations (see section 3.3.3), which are "more event-like" and "more akin to things that *happen*" (Carlson 1977:448).⁸ For example, the verb *xizao* "to take a bath" can take the progressive *zai* and is judged as a dynamic verb. However, because *yongyou* "to own" is a stative verb, it cannot take the progressive *zai*.⁹

Several other syntactic tests have been proposed in the literature. Dowty (1979:184), for example, suggests that situations that can occur in the cleft structure of *do* and agentive contexts like imperatives, *persuade to V*, *do X deliberately* are dynamic. But these tests are not perfectly reliable (cf. Olsen 1994). Moens (1987:140) argues that the accessibility test with punctual tem-

poral expressions is “the most accurate diagnostic to test for stativity.” According to Moens, when a stative situation is combined with a punctual reference time, the state is accessible to this reference point, i.e. it can be temporally situated within the state.¹⁰ For a non-stative situation, such an overlap relation is not possible. The accessibility test, however, seems to be more effective in testing *durativity* rather than *dynamicity*, because any durative situation, whether stative or dynamic, will meet the test.

3.2.2 [\pm Durative]

[\pm Durative] as a feature relies on the contrast between a [+durative] situation which “lasts for a certain period of time (or at least, is conceived of as lasting for a certain period of time)” (Comrie 1976:41) and a [–durative] situation which “does not last in time (or at least is not conceived as lasting in time)” (*ibid*:41–42). Durativity is a mental concept, hence duration is relative and can be of any specified temporal length (cf. Mellor 1995:11). For example, *John slept* is durative whereas *John coughed* is punctual. What matters of course is not how much time John’s sleep or cough actually takes but that a typical cough is so short that conventionally speakers do not focus on its internal structure (see section 3.1; cf. also Saeed 1997:111).

The earliest tests for durativity were proposed by Vendler (1967) to distinguish states from achievements. However, Vendler misleadingly suggests that all verbs denoting durativity satisfy the “*For how long?*” test. However, on closer examination, it is found that the *for*-PP test only works well with states and activities, not with accomplishments, e.g. #*For how long did you draw a circle?*¹¹

Brinton (1988:25) and Smith (1997:42) suggest that the [\pm durative] distinction can be made on the basis of the meanings of the progressive with different situations. With [–durative] situations, the progressive produces an iterative reading (e.g. *John is breaking bottles*) whereas with [+durative] situations, it produces an ongoing reading (e.g. *John is humming a tune*). While this test functions to differentiate semelfactives from activities, it is inoperative for the distinction between achievements and accomplishments, because achievements taking the progressive do not express the intended meanings.¹² In Chinese, the progressive as a test for durativity is also unreliable, because achievements are normally not supposed to take the progressive (see section 5.2).

Mellor (1997:11) approaches this distinction from a different perspective by suggesting the following test for punctuality: “An *at*-adverbial is felicitous with such event references which present the event as if it is instantaneous.” While it is true that all punctual situations are appropriate with *at*-adverbials, for this test to be meaningful it should be able to exclude durative situations. Unfortunately, it can’t, as the following durative situations are also felicitous with *at*-adverbials, as in (6):¹³

- (6) a. You could eat dinner at 5 o’clock in the afternoon if you felt like it.
b. At nine thirty she tried Dyson’s home number. No answer.

However, this test can be repaired through a slight modification: with a punctual reference time, durative situations either have an inceptive reading, as in (6a-b) or are unacceptable, as in **John was tall at 10 a.m.* (cf. Frawley 1992: 307). This modified test also works well in Chinese. Consider the following examples:

- (7) a. *11-yue 26-ri xiawu 4 dian 30 fen,*
November 26-date p.m. 4 o’clock 30 minute,
si-ming ganjing mimi likai Shaoyang
four-CLF police secretly leave Shaoyang
“Four policemen left Shaoyang secretly at 4:30 p.m. on November 26”
b. *wuye 12 dian, yi-liang jingche chao*
mid-night 12 o’clock, one-CLF police-car towards
Zhenzhuang jisu shi-qu
Zhenzhuang high-speed rush-away
“At midnight, a police car rushed towards Zhenzhuang at high speed”
c. *mouxie guoren (*xiawu san dian) xiangxin mingyun*
some countryman (*p.m. three o’clock) believe fate
“Some countrymen believe in fate (*at 3 p.m.)”

In (7a) the situation *likai Shaoyang* “to leave Shaoyang” co-occurring with a punctual reference time has an instantaneous reading and is thus judged punctual. On the other hand, durative situations co-occurring with a punctual reference time either have an “ingressive” (Comrie 1976:20) or inceptive reading (7b) or become ungrammatical (7c).

In Chinese, the most reliable test for durativity is the collocation test with the durative aspect marker *-zhe* (see section 5.1). For example, of the 238 instances of the durative *-zhe* found in the Weekly corpus, 236 are activities

(e.g. *xiao* “smile”) while the other two involve semelfactives (e.g. *pai* “pat”), which actually behave like activities when denoting multiple events (cf. section 3.3.1).

3.2.3 [\pm Telic]

The terms ‘telic’ and ‘atelic’ were coined by Garey (1957: 106) to reflect the old distinction between Aristotle’s *kinesis* (accomplishments) and *energeiai* (activities or states) (cf. Dahl 1981: 80; Brinton 1988: 25). There is a vast literature relating to this distinction and many conflicting terminologies have been developed to express this basic idea. For Jackendoff (1990), it is a bounded/unbounded distinction; for Moens (1987), it is a culminated/non-culminated distinction; for Tenny (1994), it is a delimited/non-delimited distinction, while Comrie (1976), Brinton (1988: 25) and Smith (1988, 1997) follow the terminology of Garey (1957).¹⁴ It is hardly surprising that the [\pm telic] distinction has aroused so much interest because situation aspect revolves around this distinction (cf. section 3.4).

While the consensus is that the [\pm telic] distinction is essential to aspectual classification, there is no uniform definition of telicity. For Garey (1957: 106), an action is telic if it tends “towards a goal.” But this definition is somewhat misleading, because activities like *The submarine moved towards the North Pole* and *John studied for a bachelor’s degree* certainly tend towards a goal (Dahl 1981: 86). The problem here is that the situations *moving towards the North Pole* and *studying for a B.A.* indicate “a direction but not a necessary goal” (Brinton 1988: 26) as “*towards* contrasts with *to* and *as far as* and the choice of *towards* indicates that the speaker excludes a final boundary” (Miller 1999: 40). Furthermore, the term ‘goal’ may imply the result of human agency, but this is not the case, as “a rock falling to the ground from a cliff is a telic event” (Smith 1997: 19).

In order to avoid the agentive connotation, Comrie (1976: 45) uses ‘well-defined terminal point’ instead of goal. But for Comrie, only durative situations can possibly be telic, because he defines a telic situation as “one that involves a process that leads up to a well-defined terminal point.” Comrie’s assertion is made more explicit when he says that “[i]n expressions referring to telic situations it is important that there should be a process leading up to the terminal point as well as the terminal point” (Comrie 1976: 47). According to Comrie, therefore, *John reached the summit* is not telic, “since one cannot

speak of the process leading up to John's reaching the summit by saying *John is reaching the summit.*" However, it can be argued that the reason for the incompatibility of this sentence with the progressive is that this sentence denotes a punctual event with a well-defined terminal point, i.e. an achievement. If there is no such built-in final endpoint, a punctual situation (namely, a semelfactive) can indeed take the progressive, e.g. *John is coughing.*

Smith (1997: 19) simply associates the [\pm telic] distinction with the nature of the final endpoint: while telic events have a natural final endpoint, atelic events have an arbitrary final endpoint.¹⁵ For Smith, an achievement like *John reached the summit* has the feature [+telic] even though it is punctual (1997: 20). However, we will only agree with Smith this far in her definition of telicity, because elsewhere (1991: 29, 49, 58, 1997: 27, 31) she seems to suggest that a natural final endpoint necessarily involves a result or change of state. In fact natural endpoints may not necessarily involve a result, as in the case of semelfactives.¹⁶

Note that telicity is defined here differently from previous studies. In our model, the feature [\pm telic] is associated with the presence or absence of a 'final spatial endpoint' (see section 3.2.5 for the distinction between a final spatial endpoint and a final temporal endpoint).

Several behavioural tests have been suggested in the literature to differentiate a telic situation from an atelic one. The entailment test proposed by Garey (1957: 195) is widely accepted (e.g. Vendler 1967; Klein 1974: 106–107; Comrie 1976: 44–45; Brinton 1988: 26; Siewierska 1991: 51). Garey (*ibid*) asserts that the telicity value of a verb can be tested with the question "if one is *verbing* but interrupted while *verbing*, has one *verbed*?" With an atelic situation, like *playing* or *singing*, the answer is *yes*, while with a telic situation like *drowning* or *making a chair*, the answer is *no*. To put it in more general terms, "an atelic imperfective entails its perfective, but a telic imperfective does not" (Brinton 1988: 26). The entailment test, however, does not apply to Chinese, because the negative adverb *mei* "not" negates the *realisation* rather than the *completion* of an event (cf. also He 1992; Kang 1999: 40). For example, *ta mei kan na-ben shu* "He didn't read that book" means that the reading event did not occur at all. To express the meaning intended in the entailment test, the RVC (resultative verb complement) form *kan-wan* "to read-finish" must be used: *ta mei kan-wan na-ben shu* "He didn't finish reading that book".

From Vendler (1967: 101) onwards, the compatibility test with *for/in*-adverbials has been in operation as a diagnostic for determining the telicity

value of a situation. A [-telic] situation is compatible with a *for*-adverbial (e.g. *John walked for an hour*) whereas a [+telic] situation is compatible with an *in*-adverbial (e.g. *John wrote a letter in an hour*). The Chinese equivalents of *in an hour* and *for an hour*, (*zai*) *yi-ge xiaoshi nei* and *yi-ge xiaoshi* respectively, also work well (e.g. *zai qi-fenzhong nei daoda* “to arrive in seven minutes” and *shouhou yi-tian* “to wait for one day”). All of the 13 instances of *in*-PPs found in the Weekly corpus indicate the [+telic] value of the situations concerned.

As noted in section 3.1, it is important to classify verbs and situations at two different levels. But if one uses only the three traditional parameters, the problem of the double lexicon entry encountered by Vendler (cf. section 3.1) cannot be avoided. To circumvent this problem, it is necessary to introduce two new binary features, namely, [\pm result] and [\pm bounded]. These features not only enable us to discuss verb classes and situation types separately in English, they are also of special significance to the aspectual classification of verbs and situations in Chinese (cf. sections 3.4.1 and 4.4).

3.2.4 [\pm Result]

Having discussed the three traditional parameters, it is now appropriate to introduce two new parameters which complete the classification system used in our model, [\pm result] and [\pm bounded].

To begin with [\pm result], as noted in section 3.2.3, Smith (1997) associates the natural final endpoint of a telic situation with a result. Thus both of the [+telic] situation types in her model (i.e. accomplishments and achievements) involve some result. The major types of result Smith identifies for the two situation types are summarised in Table 3.4.

Table 3.4. Smith's (1997:27, 31) major types of result for telic situations

Type of result	Accomplishment	Achievement
1. Affected object	<i>bend an iron bar, wrinkle a dress</i> ¹⁷	<i>break a cup, tear a paper</i>
2. Constructed object	<i>build a house, write a letter</i>	<i>imagine a city, define a parameter</i>
3. Consumed object	<i>destroy a house, drink a glass of wine</i>	<i>explode a bomb</i>
4. Affected experiencer	<i>amuse Mary</i>	<i>see a comet</i>
5. Path-Goal	<i>walk to the lake, walk from 2 to 3</i>	<i>reach the top, arrive in Boston</i>

Although we differ from Smith in our definition of telicity, her idea of *result* is particularly useful for the analysis of the aspect system in Chinese, because resultative verb complements (RVCs) occur very frequently and are highly relevant to both situation aspect and viewpoint aspect in this language (see section 3.4.1 and 4.4).

In our model a verb is assigned the value [+result] if its meaning includes a reference to a changing point at which the final spatial endpoint denoted by the verb starts holding (cf. Moens 1987: 140). While an achievement verb and an accomplishment verb both have a final spatial endpoint, they differ in that the former indicates the success of achieving that endpoint (e.g. *yingqiu* “to score (a goal)”) but the latter does not (e.g. *xiexin* “letter-writing”). In other words, both verb classes involve a result, but they do so in different ways. While an achievement encodes a result itself, an accomplishment only implies a result and the implied result has to be made explicit by the NP or PP arguments of the verb, as in (8a). Once these arguments are optionally absent, an accomplishment verb no longer has a final spatial endpoint and can only allow an atelic reading, as in (8b). In contrast, [+result] verbs always have a telic reading whether or not there is an additional argument indicating a final spatial endpoint. This fact also lends evidence that achievement verbs encode a result. Compare (9a) and (9b). It can be seen that telic verbs do not necessarily encode a result.

- (8) a. She [...] ate nine ham rolls (in/*for 10 minutes).
 b. Bullseye [...] ate like a horse (*in/for an hour).
- (9) a. He won the World Match-play title (in/*for a minute).
 b. Dan won (in/*for a minute).

As [+result] verbs include a reference to the successful achievement of the encoded final spatial endpoint, situations denoted by these verbs cannot be contradicted by a conjoined second clause. For example, if you assert that *tamen quxiao-le na-chang bisai* “They cancelled the game” in the first clause, you cannot possibly contradict this assertion by saying **keshi mei quxiao-cheng* “but did not succeed” in a conjoined clause. As such, the contradiction test can be used to determine the [\pm result] value.

In this book, the feature [\pm result] is defined in line with Moens (1987: 140). It should be noted that while Smith (1997) also associates some types of result with accomplishments and achievements, her interpretation of result is, however, different from the [\pm result] distinction in our model. For Smith, all

[+telic] situations have a natural final endpoint that necessarily leads to a result, that is, *result* is identified with *telicity*. In our analysis, a verb or situation is [+result] only if it encodes a result itself. Only achievement verbs and situations carry the value of [+result]. Our definition of result also differs from that of Shirai (1991) and Shirai & Andersen (1995:756), where [+result] refers to “observable outcomes salient to the child.” In our analysis, a result associated with an achievement verb or situation may not necessarily be observable. Rather it can be abstract as long as it is encoded in the verb/situation itself.

3.2.5 [\pm Bounded]

Smith (1997) classifies instantaneous events like *tap* and *knock* as semelfactives and assigns the value of [–telic] to this category (cf. section 3.1). As noted in section 3.2.3, Smith intends a [+telic] situation to have a natural final endpoint. It is obvious that Smith does not think instantaneous situations like semelfactives have a natural final endpoint. However, this is arguable, as if semelfactives have no natural final endpoint, how can they produce iterative readings?

A punctual situation, be it an achievement like *reaching the mountain top* or a semelfactive like *coughing*, is conceived of as having no inherent duration, “not even duration of a very short period” (Comrie 1976:42),¹⁸ hence its initial endpoint overlaps with its final endpoint (cf. Siewierska 1991:51).¹⁹ Because of its punctual nature, we argue that the final endpoint of a punctual situation is as natural, inherent and well-defined as its initial endpoint (the two are actually the same point), though it should be kept in mind for the moment that the final endpoint of a semelfactive is different from that of an accomplishment or an achievement. Our argument here concerns “the relation of telic to punctual situations” (Brinton 1988:27).²⁰ How far are these two categories distinct? Bauer (1970) asserts that they belong to the same category:

As far as momentaneous actions are concerned (e.g., *find*, *catch*, *kick*, *touch*, etc.), they have to be included among telic verbs, the only peculiarity about them being that the initial phase of the action, which leads up to the goal or conclusion, is minimal or nil. (Bauer 1970:192)

Jespersen (1924:272–274) also argues that both telic and punctual situations “imply a final aim (*endzweck*).” In Dik (1989), punctual situations are also treated as telic.²¹

The controversy regarding the telicity value of semelfactives arises from different understandings of *final endpoint*.²² Traditionally, endpoints have been understood as temporal notions (e.g. Bennet & Partee 1978). Initial and final endpoints are two points on the time axis which indicate the beginning and the ending of a situation respectively. Later some linguists began to interpret endpoints in terms of space. Van Voorst (1988), for example, maintains that

Instead of considering endpoints in time, we can interpret them as objects in reality that are used to identify these endpoints. This implies that the temporal analysis of events is replaced by an analysis using spatial notions. (van Voorst 1988:27)

According to van Voorst, a situation is telic only when it has an ‘object of termination’, i.e. an object that undergoes an identifiable change of state. *John wrote a letter* is telic, because *a letter* serves as the object of termination, whereas *John walked* is atelic, because there is only an ‘object of origin’ (i.e. *John*) but no object of termination. At this point, one might be tempted to jump to the conclusion that only structures with transitive verbs can be telic, but this temptation is dangerous. In fact, not all transitive structures are telic and not all intransitive structures are atelic. For example, *John wrote letters* is atelic because mass nouns and bare plurals are not delimited in space and cannot serve as the object of termination.²³ However, *The window broke* is telic because it involves a termination object that underwent an identifiable change of state.

Tenny (1994:26) also argues explicitly that telicity and boundedness are “the same thing in two different domains: the spatial and the temporal.” They are the same thing in that they are both final endpoints; and they are different in that they apply to different domains. A temporal endpoint is different from a spatial endpoint. Tenny (1994) uses the term *delimitedness* rather than telicity. According to Tenny, a situation is delimited if it involves *measuring out*. There are three ways in which a situation can be measured out by its internal argument. With an ‘incremental-theme verb’ like *eat* or *build*, an internal direct argument is consumed or created over time; with a ‘change-of-state verb’ like *break*, an event is supposed to be measured out when the internal argument undergoes a definite change in its property; with ‘route/path-object verbs’ like *walk to school* or *play a sonata*, the internal argument specifies a path or distance over which the event progresses. These three ways

of measuring out clearly show that Tenny's delimitedness feature is also spatially defined.

Smith's (1991, 1997) definition of telicity (see section 3.2.3) does not show clearly whether she interprets final endpoints in terms of space or time. But judging from the types of result she associates with telic situations (see section 3.2.4), it appears that Smith also interprets endpoints primarily in spatial terms. However, her example *walk from 2 to 3* shows that a final endpoint can also be understood as a temporal notion. It is this conflation that has led to her denial of a natural final endpoint in semelfactives, we believe.

A final temporal endpoint is basically different from a final spatial endpoint. The localist hypothesis, which has been put forward with particular reference to aspect (Lyons 1977:718), and to which Lyons appears to subscribe, states that "[s]patial expressions are more basic, grammatically and semantically, than various kinds of non-spatial expressions." In this sense, spatial delimitedness always implies temporal boundedness, but the reverse is not true. For example, as the situation *walk to school* is delimited spatially (i.e. a specified distance), it must also be bounded temporally (e.g. it usually takes John ten minutes to cover the distance). However, if John walked for only three minutes today, the situation became bounded temporally. In this case, the temporally bounded situation does not have a final spatial endpoint. In our model, the feature [\pm bounded] refers to the presence or absence of a final temporal endpoint while the feature [\pm telic] is related to a final spatial endpoint.

It should be noted that just as [+result] always implies [+telic], [+telic] also implies [+bounded]. In other words, [-result] may mean either [+telic] or [-telic]; and similarly, [-telic] may mean either [+bounded] or [-bounded]. The three endpoint-related features are hierarchically structured, with [\pm result] at the top and [\pm bounded] at the bottom.²⁴ The hierarchical relations of these three endpoint-related features are illustrated in Figure 3.3.

Having discussed two newly defined distinguishing features (i.e. [\pm result] and [\pm bounded]) and three established parameters (i.e. [\pm dynamic], [\pm durative] and [\pm telic]), it is now appropriate to discuss verb classes (section 3.3) and situation types (section 3.5) separately; and with the mapping rules to be proposed (section 3.4), the roles played by individual sentential constituents will be made clear in the composition process of situation aspect.

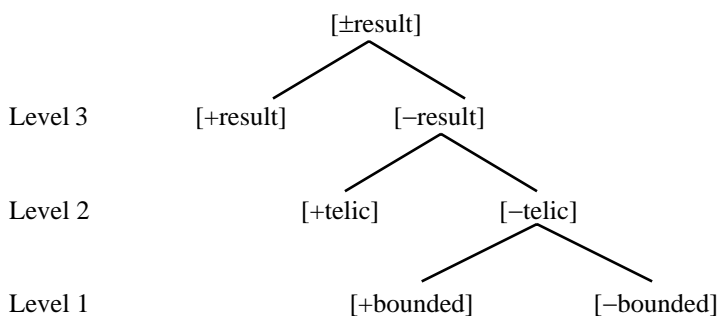


Figure 3.3. Hierarchical relations of three endpoint-related features

3.3. The lexical level: verb classes redefined

In our model, verbs are classified in ‘neutral contexts’, a concept similar to Moens’ (1987:131) ‘basic proposition’ or Lys & Mommer’s (1986:218) ‘frame’. The context is deemed neutral when everything has been excluded that might change the aspectual value of a verb. This means that of the six determinants of situation aspect identified by Mourelatos (1981:199; see section 3.1), the inherent features of verbs alone are taken into account. In English, for example, a neutral context is typically a simple clause in which:

- (i) the verb is in the past tense;
- (ii) the object is syntactically and semantically a singular countable noun and should only be present if it is obligatory, i.e. with a necessarily transitive verb;
- (iii) viewpoint aspect must be simple (cf. Lys & Mommer 1986:218).

Thus, *John walked* is neutral whereas *John walked me home* is not, nor is *John was walking*. In Chinese, a neutral context is similar except that there is no tense requirement and a perfective viewpoint aspect is preferable (e.g. *ta daying-le* ‘He agreed’). These restrictions are imposed to avoid the possible influences of other sentential constituents (e.g. complements, arguments and non-arguments) on verbs (see section 3.4).

There are 32 combinations of the five binary features discussed in section 3.2. However, this does not mean that there are 32 verb classes, because combinations of conflicting features must be ruled out, as shown in Table 3.5.

Table 3.5. Feature combinations of five binary features

V-class	[±dyn]	[±dur]	[±bnd]	[±telic]	[±result]	Explanation
ACC	+	+	+	+	-	
ACH	+	-	+	+	+	
ACT/SLS	+	+	-	-	-	
ILS/SLS	-	+	-	-	-	
SEM	+	-	-	-	-	
SEM	+	-	+	-	-	
X	+	+	+	+	+	[+res] ⇒ [-dur]
X	+	+	-	+	+	[+telic] ⇒ [+bnd]
X	+	-	-	+	+	[+telic] ⇒ [+bnd]
X	-	-	-	+	+	[+telic] ⇒ [+bnd]
X	-	+	+	+	+	[-dur] ⇒ [-dyn]
X	-	-	+	+	+	[-dur] ⇒ [+dyn]
X	-	+	-	+	+	[+telic] ⇒ [+bnd]
X	+	+	+	-	+	[+res] ⇒ [+telic]
X	+	+	-	-	+	[+res] ⇒ [+telic]
X	+	-	-	-	+	[+res] ⇒ [+telic]
X	-	-	-	-	+	[+res] ⇒ [+telic]
X	-	+	+	-	+	[+res] ⇒ [+telic]
X	-	-	+	-	+	[+res] ⇒ [+telic]
X	+	-	+	-	+	[+res] ⇒ [+telic]
X	-	+	-	+	+	[+telic] ⇒ [+bnd]
X	+	+	-	+	-	[+telic] ⇒ [+bnd]
X	+	-	-	+	-	[+telic] ⇒ [+bnd]
X	-	-	-	+	-	[+telic] ⇒ [+bnd]
X	-	+	+	+	-	[+telic] ⇒ [+dyn]
X	-	-	+	+	-	[-dur] ⇒ [+dyn]
X	-	+	-	+	-	[+telic] ⇒ [+bnd]
X	-	-	-	-	-	[-dur] ⇒ [+dyn]
X	-	-	+	-	-	[-dur] ⇒ [+dyn]
Unattested	+	-	+	+	-	
Unattested	+	+	+	-	-	
Unattested	-	+	+	-	-	

Legends: ACC (accomplishment) ACH (achievement)
 ACT (activity) SEM (semelfactive)
 ILS (individual-level state) SLS (stage-level state)
 X (invalid combination) ⇒ (entailment)

As noted in section 3.2.5, the three endpoint-related binary features are hierarchically structured. Therefore, feature combinations containing both [+result] and [-telic], or both [+telic] and [-bounded], or both [+result] and [-bounded] are not possible. As the achievement of an encoded result is

always punctual, the feature combinations containing both [+result] and [+durative] are not possible. If a situation is instantaneous or has a final spatial endpoint, it is obvious that the situation is [+dynamic] (cf. also Lindvall 1997), thus the combinations with both [–dynamic] and [–durative], or with both [–dynamic] and [+telic], can also be excluded. Of the nine remaining combinations, three patterns are unattested in our data as basic verb classes in neutral contexts, though two of them are good as derived situation types at the clause level (cf. section 3.5).²⁵

It is also interesting to note that while on the one hand, the feature combination of [+dynamic], [+durative], [–bounded], [–telic] and [–result] can be instantiated either as activities or as ‘stage-level states’ (SLSs), on the other hand, the feature combination of [–dynamic], [+durative], [–bounded], [–telic] and [–result] can be instantiated either as ‘individual-level states’ (ILSs) or as SLSs; it is no coincidence that SLSs have sometimes been considered as a transitional class between states and activities (e.g. Carlson 1981:39).

The six verb classes attested on the basis of our data are activities vs. semelfactives, accomplishments vs. achievements, and individual-level states (ILSs) vs. stage-level states (SLSs), which are defined as follows.

3.3.1 Activity verbs vs. semelfactive verbs

Our class of activity verbs does not differ much from Smith’s (1997). They are dynamic and durative in nature, involve no final spatial or temporal endpoint and encode no result (e.g. *deng* “wait”, *paobu* “run” and *xunzhao* “look for”). That is, activity verbs have the features [+dynamic], [+durative], [–bounded], [–telic] and [–result]. The [–bounded] feature determines that their co-occurrence with durative adverbials (e.g. *wo zai budui gan-le haoji-nian* “I worked in the army for many years”) or the progressive (*ta yizhi zai ku* “He was crying all of the time”) can only produce an ongoing single-event reading.

Although semelfactive verbs group with activity verbs in that they are also dynamic verbs involving no final spatial endpoint and encoding no result, the two categories are different. Since semelfactives are prone to shift between single-event and multiple-event readings (cf. Comrie 1976:42), their final temporal endpoints can be overridden and thus they have the feature [±bounded]. In short, semelfactive verbs prototypically have the features [+dynamic], [–durative], [±bounded], [–telic] and [–result]. In contrast with activity verbs, semelfactive verbs intrinsically involve a final temporal endpoint. Therefore, semelfactives easily suggest iterative multiple-event readings. The situation *John coughing*, for

example, may be interpreted as a single event (John having one cough) or as a multiple event (John having a series of coughs) unless otherwise stated, as in *John coughed once*. When a semelfactive verb takes an adverbial denoting temporal length (e.g. *da-le ni ji-tian?* “For how many days did they beat you?”), a verbal classifier phrase (e.g. *ye chao ta toudang kan-le shu-dao* “(Liu) also chopped at her head several times with his knife”),²⁶ or the progressive (e.g. *zai guzhang* “were clapping their hands”) or durative marker (e.g. *yao-zhe tou tanxi* “sighed while shaking her head”), they always produce an iterative reading. Yet even in these cases, semelfactives are different from activities: the former have iterative readings whereas the latter only allow ongoing readings. When they have multiple-event readings, semelfactives are still semelfactives, and the multiple event is merely a repetition of their complete temporal structure.²⁷ The contrast between a semelfactive and an activity is illustrated in Figure 3.4.

In the figure, the dotted line represents the multiple rope-jumping event, on which each dot is a single event of rope-jumping. The multiple event is durative and only bounded temporally by the durative adverbial *for an hour*, and each single event contained therein has its own complete internal structure (i.e. its initial endpoint and intrinsic final temporal endpoint) and is temporally bounded inherently. On the other hand, the solid line represents a single event of running. Although it is also durative, the single event only allows an ongoing rather than an iterative reading. The event does not have any final endpoint in itself, and the temporal boundary is provided by the temporal adverbial *for an hour* (see section 3.4.3; cf. also Vet 1980; Moens 1987; Naumann 1995). So semelfactives can indeed be counted and Mourelatos’ processes should be fine-grained (see section 3.1).

3.3.2 Accomplishment verbs vs. achievement verbs

Traditionally, these two verb classes have been distinguished primarily by the [\pm durative] feature. Accomplishments are [+durative] whereas achievements are [–durative] (e.g. Smith 1997). However, in our model the difference between the two categories lies mainly in whether they do or do not encode a

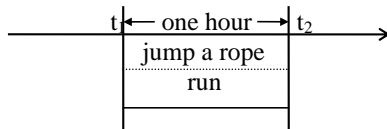


Figure 3.4. Temporal structures of a semelfactive and an activity

result. While accomplishments and achievements are both telic verbs, they have different emphases and involve a result in different ways. By the [\pm result] criterion, accomplishment verbs place emphasis on the process leading up to a result (i.e. the preparatory process on Moens' (1987) event nucleus) but verbs themselves do not provide any information concerning the success in achieving the result; they imply but do not encode a result. The result is specified by their arguments or non-arguments. In contrast, achievement verbs encode a result themselves (cf. section 3.2.4). As verbs of this latter class place emphasis on the successful achievement of the result, the preparatory process leading up to a result is not important. Therefore, the process can either be ignored or only functions adverbially. Resultative verb complements (RVCs) in Chinese illustrate this point well. RVCs encode both a process and a result. For example, *da-po chabei* "to break a cup" not only indicates the result of the cup being broken, it also provides information as to how the cup is broken. Nevertheless, the focus of RVCs is normally on the result (cf. Klein et al. 2000: 751; Hsieh 2001). It is the resultative complement that plays the key role, and the verb preceding it either functions adverbially to indicate manner (e.g. *pa-dao* "to reach by climbing or crawling") or cause (e.g. *e-ku* "to cry as a result of hunger").²⁸

As the preparatory process emphasised by accomplishment verbs normally takes time, accomplishments are [+durative] in nature. On the other hand, the achievement of the result encoded in an achievement verb is normally conceived to be punctual,²⁹ thus achievement verbs are intrinsically [–durative]. Furthermore, as these two verb classes are both [+telic], they are necessarily [+bounded]. The features of accomplishment and achievement verbs can be summarised as follows: accomplishments are verbs with the features [+dynamic], [+durative], [+bounded], [+telic], and [–result] in that they focus on the process leading up to but not necessarily achieving the implied result (e.g. *chi* "eat" and *xie* "write"), while achievements are verbs with the features [+dynamic], [–durative], [+bounded], [+telic], and [+result] in that they focus on the successful achievement of the encoded result with or without profiling the process leading up to the result (e.g. *ying* "win", *daoda* "arrive" and *zhaodao* "find") (cf. also Yang 1995: 44).

3.3.3 Individual-level state verbs vs. stage-level state verbs

One problem noted in section 3.2.1 is that sometimes states (or more precisely, some states) can take the progressive felicitously. Any theory of aspect should be able to account for this. In this section, we will present our account of how this occurs. An important part of our account rests upon distinguishing two types of states: individual-level and stage-level states.

Distinguishing different types of states is not an innovation of our approach – it has been done before. Carlson (1981: 39) proposes a six-way taxonomy of aspectual classes, in which an intermediary class ‘dynamic’ is recognised between stative and activity sharing the properties of both.³⁰ Although we do not agree with Carlson (1981) on the selection of her three parameters,³¹ her decision to split states into two subcategories is quite appealing. Such a fine-grained treatment of states would enable one to account for the “event-like” properties (Carlson 1977: 448) of some state verbs. Following Carlson (1981), we argue that there are indeed two types of states, namely, individual-level states (ILSs) and stage-level states (SLSs).³²

The distinction between individual-level and stage-level predicates was first introduced by Carlson (1977: 448) to explain different readings of English bare plural nouns. But such a distinction is also very helpful in accounting for the different behaviours of states.³³ Following Milsark (1974), Carlson argues that there is a distinction between individual-level predicates and stage-level predicates, and meanings of bare plural nouns vary depending on the type of predicates they co-occur with:

[...] the predicates selecting the ‘indefinite plural’ are predicating something of an individual for a short period of time, while the predicates selecting the generic leave the implication that what is predicated of the individual is of a more permanent nature. (Carlson 1977: 448)

In other words, stage-level predicates express transient or episodic stages of an individual (such as *hungry*, *sleeping*, *awake*, *drunk* and *available*). Thus they vary over time and/or place; in contrast, individual-level predicates are predicating inherent and permanent dispositions of an individual (such as *tall*, *fat*, *clever* and *obnoxious*), thus they remain unchanged irrespective of time and/or place.

Carlson (1977: 448) also argues that the length of time is not an essential quality which differentiates between individual-level and stage-level predicates and assumes that the two are predicated of “different sorts of thing.” The

former are predicated of dispositions of an individual whereas the latter are predicated of stages of an individual. This argument, however, amounts to the same effect, because the stages of an individual are always less permanent than the individual's inherent dispositions. A stage-level predicate like *be drunk*, for example, is expected to end whereas an individual-level predicate like *be tall* is not. The relative temporariness of stage-level predicates has also been proposed as a determinant for selection of Spanish auxiliaries (Luján 1981:167; cf. Olsen 1994). Our hypothesis that two types of states exist is also supported by the different ways they interact with viewpoint aspect. That is, SLSs have to be marked aspectually to have a specific closed reading, whereas ILSs do not have such a requirement (see chapter 4).³⁴

ILS and SLS verbs can be defined respectively as follows: ILS verbs are stative durative verbs that do not have a final temporal or spatial endpoint and do not encode a result in the sense that they are normally predicated of permanent dispositions of an individual (e.g. *xiang* “resemble” and *chengshi* “honest”). That is, they have the features [–dynamic], [+durative], [–bounded], [–telic] and [–result]; SLS verbs are durative and generally stative verbs that do not have a final temporal or spatial endpoint and do not encode a result in the sense that they are normally predicated of less permanent stages of an individual (e.g. *bing* “be ill” and *mang* “be busy”).³⁵ That is, they have the features [±dynamic], [+durative], [–bounded], [–telic] and [–result].

The dichotomous treatment of states proposed in this book is not only well justified, it is also more explanatory of the behaviours of states. With the ILS/SLS distinction, the event-like properties of some states can be accounted for easily. As has been recognised in the literature, state verbs are not normally compatible with the progressive or imperative (cf. section 3.2.1), because they tend to describe the more permanent, or “timeless” (Carlson 1977:446) characteristics of an individual; but when they do occur in these contexts, they “name the characteristics closely associated with various kinds of behaviours” (Brinton 1988:40). In other words, they describe ‘stages’ of an individual, which are considered as temporary or contingent in nature (cf. Leech 1971:16; Comrie 1976:36; Lyons 1977:717). Compare (10a) and (10b). The verb constellation in (10a) is predicated of the individual Max himself, and the state described is related to his inherent dispositions or properties, without which the individual would not be Max. On the other hand, the verb constellation in (10b) is predicated of stages of the individual Max, that is, his current actions or behaviours, thus (10b) can be interpreted as *Max made a fool of himself* on a

particular occasion.³⁶ The quality predicated by stage-level predicates can be removed without changing the essential quality of the individual. As stages of an individual are more temporary than the individual's dispositions, (10b) takes the progressive to refer to a particular stage of the individual Max.³⁷

- (10) a. Max is a fool.
 b. Max is being a fool. (Carlson 1977: 448)
- (11) a. Be careful/sensible.
 b. *Be tall/short.

The ILS/SLS distinction also explains why some state verbs can occur in imperatives while others cannot. Compare the acceptability of the examples in (11). It is clear that (11a) is acceptable whereas (11b) is not, because the former describes the current behaviours or stages of an individual while the latter describes the inherent dispositions or properties of an individual. As SLSs have the feature [\pm dynamic], SLS verbs that imply a strong sense of actionality can take imperatives.³⁸ In fact, (11a) can be interpreted as *Behave carefully/sensibly*, because it refers to one's behaviour on a particular occasion.

In conclusion, the six verb classes attested on the basis of our data constitute the lexical component of our aspect model. The semantic features of these verb classes can be summarised in Table 3.6.

Table 3.6. Feature matrix system of verb classes

Classes	[\pm dyn]	[\pm dur]	[\pm bnd]	[\pm telic]	[\pm result]
ACTs	+	+	-	-	-
SEMs	+	-	\pm	-	-
ACCs	+	+	+	+	-
ACHs	+	-	+	+	+
ILSs	-	+	-	-	-
SLSs	\pm	+	-	-	-

While this section has focused on the establishment of a feature matrix system of verb classes, this also gives an account of situation aspect at the lexical level. However, as this book has a two-level focus in modelling situation aspect, it is necessary to focus on the interaction between the lexical and the sentential levels.

3.4. The rules for the three-level interaction at the sentential level

As widely observed (e.g. Verkuyl 1972, 1989, 1993; Freed 1979: 24; Smith 1991, 1997; Brinton 1988; Tenny 1994; Jackendoff 1991; Mourelatos 1981; Dowty 1972, 1979; Declerck 1979; Filip 1999), situation aspect is essentially compositional in nature. It is a composite result of the interaction between a basic verb class and its complements, NP-arguments,³⁹ PP-arguments and non-arguments such as adjuncts and viewpoint aspect, though verbs play the central role (cf. Smith 1997: 54; Zhang 1995: 7; Freed 1979: 11; Cheng 1988). While some rules governing this interaction have been proposed in the literature (e.g. Verkuyl 1993; Smith 1997), they are only related to NP-arguments and PP-arguments and have not been tested against attested language data.

In this section, we will propose 12 rules for the composition of situation aspect at the sentential level.⁴⁰ As noted at the beginning of this chapter, the sentential level consists of three syntactic units: nucleus, core and clause. The nucleus deals with predicates. The core deals with predicates and arguments. The clause deals with predicates, arguments and non-arguments. Section 3.4.1 is concerned with the interaction at the nucleus level (Rules 1–2) and will examine the roles of RVCs and verb reduplication in Chinese as well. Section 3.4.2 will discuss the effects of NP and PP-arguments on situation types at the core level (Rules 3–6). In our model, NP-arguments have the nominal feature [+count] or [-count],⁴¹ and PP-arguments are either PPs_[Locative], PPs_[Directional] or PPs_[Goal]. Section 3.4.3 will discuss non-arguments that contribute to situation aspect at the clause level (Rules 7–12), including durative adverbials specifying time frames (*for*-PPs and *from...to*), verbal classifier phrases (e.g. *twice*, *five times*), the progressive, as well as the *de* resultative structure and *ba/bei* constructions in Chinese.

3.4.1 Nucleus level composition

The following rules are hypothesised by us to apply to the interaction at the nucleus level:

Rule 1: verb_[-telic/±bounded] + RVCs ⇒ Derived predicate_[+result/+telic]

Rule 2: verb_[-telic/±bounded] + reduplicant ⇒ Derived predicate_[+bounded]

Rule 1 illustrates the effect of RVCs on situation aspect. Chinese RVCs are comparable to English particles such as *up* in *eat up* and *down* in *close down*,

out in *fade out* and *off* in *shut off*, which Brinton (1988:168–169) considers as markers of telic *Aktionsart*. As Brinton (1988:168) observes, these complements “typically express a telic notion” and “may add the concept of a goal or an endpoint to durative situations which otherwise have no necessary terminus” (e.g. *hit the metal* vs. *hit the metal flat*). RVCs refer to verb complements that indicate the resultant state or phase of the situation denoted by their preceding verbs in resultative compounds. There are three types of RVCs, namely, completive (RVCCs, e.g. *xie-wan* “write-finish” and *zhunbei-hao* “prepare-complete”), result-state (RVCSs, e.g. *sha-si* “kill-dead”) and directional (RVCDs, e.g. *yun-guoqu* “faint away”) (see section 4.4.1). When these complements are added to [–telic] or even [–bounded] verbs, derived predicates become [+telic] and [+result] because the final spatial endpoint or result indicated by complements is attached to them. Compare *ta he-le jiu* “He drank” and *ta he-zui-le jiu* “He got drunk”. While it is possible to say *ta he-le jiu, keshi mei he-zui* “He drank, but was not drunk”, the version with the RVC *zui* (i.e. **ta he-zui-le jiu, keshi mei he-zui* * “He got drunk, but was not drunk”) is not acceptable. In the Weekly corpus, 1,741 instances of RVCs were found – 45 RVCCs, 864 RVCSs and 832 RVCDs. For testing, the *in*-PP test and the contradiction test are used (cf. sections 3.2.3 and 3.2.4). Examination of the corpus data shows that no matter what telicity and boundedness values basic level verbs have, their derived predicates are all [+telic] and [+result], i.e. they are achievement verbs.

In English there are no completive RVCs,⁴² and result-states RVCs can be either adjectives (e.g. *pushed the door open*) or resultative particles (e.g. *pull the cart over*). We used situations with adjectival result-state RVCs to test the reliability of rule 1 in English. Eleven situations of this type were found in FLOB,⁴³ and rule 1 passed the *in*-PP test and the contradiction test with all of them. Consider the following pairs, where the (a) sentences are attested and (b-c) are modified alternatives:

- (12) a. Marie pulled her hand **free** (*in*/*for 5 minutes).
 b. Marie pulled her hand (*for*/*in 5 minutes).
 c. Marie pulled her hand **free**, *but she did not succeed.
- (13) a. He snorted his nostrils **clear** (*in*/*for 1 minute).
 b. He snorted his nostrils (*for*/*in 1 minute).
 c. He snorted his nostrils **clear**, *but his nostrils were still not clear.

The verb *pull* in (12) is [–telic] and [–bounded] (i.e. activity) while *snort* in

(13) is [-telic] and [±bounded] (i.e. semelfactive). But when RVCs *free* and *clear* are added, both of them are turned into derived predicates that are [+telic] and [+result] in nature. That is, RVCs function to change activity or semelfactive verbs into achievement verbs. That is why (12a) and (13a) would be infelicitous if *for*-adverbials were used. Similarly, as the derived predicates encode a result, they cannot be contradicted by a conjoined clause, as shown in (12c) and (13c).

Let us now consider verb reduplication in Chinese. Because of intrinsic semantic constraints, only verbs with the features [+dynamic] and [-result] can be reduplicated to denote a delimitative meaning (cf. section 4.3). As such, *wang-wang* ‘look-look, take a brief look’ and *mo-mo* ‘touch-touch, touch a bit’ are natural whereas **pang-pang* *‘fat-fat’ and **ying-ying* *‘win-win’ are unacceptable. Verb reduplication not only provides a perspective from which to view a situation perfectly (see section 4.3), it also provides a temporal boundary to the situation denoted by a reduplicated verb and changes its boundedness value from minus to plus. For a final temporal endpoint, the *in/for*-adverbial test for a final spatial endpoint is not relevant (cf. Yang 1995). Rather, the co-occurrence test with *-le* will be used, as *-le* demonstrates a strong preference for [+bounded] situations (see section 4.1.3). There are 38 instances of verb reduplication in the Weekly corpus (36 activities and two semelfactives). Only nine are ‘actualised situations’ which can take *-le*,⁴⁴ but the verbs in all of these sentences must be reduplicated, even though the aspect marker *-le* can be optionally suppressed. Consider the following attested (a) examples and their modifications in (b):

- (14) a. *wo huitou wang-le wang zhe-ge popolanlan*
 I turn-around look-ACTL look this-CLF run-down
de jia (ACT)
 GEN home
 ‘I turned around and took a brief look at this run-down home’
- b. **wo huitou wang-le zhe-ge popolanlan*
 I turn-around look-ACTL this-CLF run-down
de jia (ACT)
 GEN home
- (15) a. *hanzi shayoujieshi mo-mo koudai you shuo [...]* (ACT)
 man pretend feel-feel pocket then say
 ‘The man pretended to be serious about feeling in his pocket, and then said [...]’

- b. **hanzi shayoujieshi mo-le koudai you shuo* [...]

man pretend feel-ACTL pocket then say
- (16) a. *laoren xiao-zhe dou-le dou shou* (SEM)

old-man smile-DUR shake-ACTL shake hand

“Smiling, the old man shook his hand”
- b. **laoren xiao-zhe dou-le shou*

old-man smile-DUR shake-ACTL hand

Clearly, all of the (a) sentences with reduplicated verbs are felicitous whereas the (b) sentences are unacceptable. The situations *wang* “to look at” (14) and *mo* “to feel” (15) are activities, which are neither [+telic] nor [+bounded]. Therefore they cannot occur with *-le*, as shown in the modified alternatives (14b) and (15b). However, when the verbs are reduplicated, the derived predicates denote temporally bounded situations, and thus can occur with *-le*. The verb *dou* “to shake” in (16) is a semelfactive. Because verbs of this class shift readily between single-event and multiple-event readings, their temporal endpoints are easily overridden. Therefore, these verbs normally group with activity verbs and usually need an extra delimiting device to provide a temporal boundary when they co-occur with *-le*. That explains why the attested example (16a) is felicitous whereas the modified alternative (16b) is ill-formed. Furthermore, it is interesting to note that in (15a) *-le* is left out but the verb reduplicant is not and cannot be omitted. This sentence conveys a complex event situation. The first event *mo koudai* “to feel in his pocket” must be actualised before the second event *shuo* “to say” can be initiated. When *-le* is omitted in the original sentence, the first verb constellation *has to be* reduplicated to perfectivise the first event (see section 4.3 for a discussion of the perfectivising function of verb reduplication).

3.4.2 Core level composition

While internal arguments such as direct objects and directional complements typically affect situation type, the question of whether or not external arguments also contribute to situation aspect is controversial. Dowty (1979), Verkuyl (1989, 1993), Brinton (1988) and Salaberry & Shirai (2002:2), for example, claim that external arguments have the same effect on situation type as internal arguments while Tenny (1994) and others argue that they do not. In our model, the rules governing the interaction between verbs and NP arguments are expressed as follows:

Rule 3: NP+Verb_[+/-telic] \Rightarrow Core_[+/-telic]

Rule 4: NP + Verb_[-telic] + NP \Rightarrow Core_[-telic]

Rule 5: NP + Verb_[+telic] + NP_[+/-count] \Rightarrow Core_[+/-telic]⁴⁵

These rules reflect the contribution of NP-arguments to the composition of situation aspect. The unspecified NPs can hold the value of either [+count] or [-count]. For the moment, let us set aside external arguments and examine internal arguments alone. Rule 3 shows that verbs are the sole determinant of situation types when internal direct arguments are optionally absent (e.g. 17a–b). Rules 4 and 5 show that with [-telic] verbs, NP-arguments do not affect situation types (e.g. 17c–d) while with [+telic] verbs (including compound verbs derived at the nucleus level), the telicity values of situations at the core level are determined by the nominal feature of internal direct arguments (e.g. 17e–f).

- (17)
- a. [...] the flames go out (in/*for one hour)
 $\text{NP}_{[+count]} + \text{Verb}_{[+telic]} \Rightarrow \text{Core}_{[+telic]}$
 - b. [...] a buzz of excitement went around (for/*in hours)
 $\text{NP}_{[+count]} + \text{Verb}_{[-telic]} \Rightarrow \text{Core}_{[-telic]}$
 - c. [...] he buzzed the skyscraper hotel (for/*in 5 minutes)
 $\text{NP}_{[+count]} + \text{Verb}_{[-telic]} + \text{NP}_{[+count]} \Rightarrow \text{Core}_{[-telic]}$
 - d. which (=documentary) pours cold water on the daredevil exploits of the stars (for/*in three days)
 $\text{NP}_{[+count]} + \text{Verb}_{[-telic]} + \text{NP}_{[-count]} \Rightarrow \text{Core}_{[-telic]}$
 - e. [...] (they) stapled on 80 shoulder-length dreadlocks (in/*for seven hours).
 $\text{NP}_{[+count]} + \text{Verb}_{[+telic]} + \text{NP}_{[+count]} \Rightarrow \text{Core}_{[+telic]}$
 - f. I opened supermarkets (for/*in 5 years)
 $\text{NP}_{[+count]} + \text{Verb}_{[+telic]} + \text{NP}_{[-count]} \Rightarrow \text{Core}_{[-telic]}$

We tested these rules using the Weekly and FLOB corpora. However, as the corpora are only annotated with part-of-speech information, but not with such semantic features as telicity and nominal values, a large-scale test proved impractical. Therefore, a segment of around 2,000 tokens was taken from FLOB (FLOB A19) and further processed by hand to allow us to undertake this analysis. As the first step in processing, all clauses without verbs (e.g. *Just like that*), with stative verbs (e.g. *We're no fools*) and reporting verbs (e.g. *said Keith*) were excluded from the sample;⁴⁶ then all of the remaining clauses were annotated with semantic features such as telicity values for verbs and nominal

values for NPs. If a complex sentence consisted of two clauses, it was counted as two simple clauses (e.g. 17d). After processing, a testbed of 135 semantically annotated simple clauses was obtained.

Table 3.7 Situation types in the FLOB sample

Sentence patterns and examples	[+telic]	[-telic]
1. NP _[+count] +Verb _[+telic] e.g. <i>all this happened</i>	21 100%	0 0%
2. NP _[+count] +Verb _[-telic] e.g. <i>We joked</i>	0 0%	20 100%
3. NP _[-count] +Verb _[+telic] e.g. <i>anything goes wrong</i>	3 100%	0 0%
4. NP _[-count] +Verb _[-telic] e.g. <i>nothing burns</i>	0 0%	2 100%
5. NP _[+count] +Verb _[+telic] + NP _[+count] e.g. <i>I heard the plane</i>	43 100%	0 0%
6. NP _[-count] +Verb _[+telic] + NP _[+count] e.g. <i>language proved a barrier</i>	4 100%	0 0%
7. NP _[+count] +Verb _[+telic] + NP _[-count] e.g. <i>I opened supermarkets</i>	0 0%	6 100%
8. NP _[+count] +Verb _[-telic] + NP _[+count] e.g. <i>the plonker waggled his wings</i>	3 10%	27 90%
9. NP _[-count] +Verb _[-telic] + NP _[+count] e.g. <i>Could anyone doubt his complete innocence [...]?</i>	0 0%	3 100%
10. NP _[+count] +Verb _[-telic] + NP _[-count] e.g. <i>which pours cold water on the daredevil exploits of the stars</i>	0 0%	3 100%
Total	74	61

As can be seen from the results in Table 3.7, the situation types denoted by clauses with the pattern of *NP+Verb* are solely determined by verbs. Twenty-four situations with [+telic] verbs (patterns 1 and 3) are all telic whereas 22 situations with [-telic] verbs (patterns 2 and 4) are all atelic, irrespective of the nominal features of their external arguments. In clauses with the pattern of *NP+Verb+NP*, situation types are the composite result of verbs and their internal direct arguments. With [-telic] verbs, atelic situations result irrespective of the nominal feature of internal arguments. Thirty-three out of 36 clauses (91.7%) with [-telic] verbs (patterns 8–10) denote atelic situations, the remaining three (8.3%) denote telic situations simply because they take a PP_[Goal], which provides a final spatial endpoint (see the discussion of rule 6). With [+telic] verbs, internal arguments also play a role. All 47 clauses with

[+count] object NPs (patterns 5–6) denote telic situations whereas the six clauses with [–count] object NPs (pattern 7) are atelic.

It is interesting to note that the nominal features of internal indirect arguments may also affect situation types (cf. Moens 1987: 151). For example:

- (18) a. Henry went through **torture** (for/*in 7 hours) to conjure up some giggles.
 b. Henry went through **the revolving door** (in/*for 2 minutes).

The *in/for*-PP tests show that (18a) is an atelic situation while (18b) is telic. The aspectual characterisations differ because the NP in the first instance is [–count] whereas that in the second is [+count].

We must now return to the question of external arguments. Our data clearly shows that external arguments do not contribute to situation aspect, because “external arguments cannot measure out the event” (Tenny 1994: 62). But for this view to be tenable, one should be able to account for following atypical, yet valid, examples:⁴⁷

- (19) a. **Brandy** evaporated from these barrels for 50 years.
 b. **A gallon of brandy** evaporated from these barrels in 50 years.

The apparently confusing contrast between (19a) and (19b) is caused by different interpretations of the *for*-PP. English uses this device to express *duration* (20a-b), *scope* (20c-d) and *intention* (20e). In French, duration is expressed by *pour* “for” whereas scope is expressed by *pendant* “during” (cf. also Moens & Steedman 1988: 21). In Chinese, expressions like *yi-nian* “one year” are used to indicate duration (e.g. *chicheng yitan sanshiduo-nian* “(She) played an outstanding role in art circles for more than 30 years”) or intention (*pan-le san-nian xing* “(He) was jailed for 3 years”). Scope is expressed by the preposition (*zai*)...*zhong* “during”, or (*yi*)*lai* “from...onwards” if the situation lasts till the beginning of the stretch of speech in which it is discussed. *For*-PPs expressing a scope meaning is basically different from those indicating a duration meaning. The distinction is clear if we consider example (20c). At the core level, the progressive is normally incompatible with *for*-PPs indicating duration (e.g. **I am watching TV for an hour*; see section 5.2.4), but it can take a *for*-PP indicating a scope meaning (as in 20c). Tenny (1994: 6) notes that the relevant interpretation of *for an hour*, when used as a test for telicity values, is that the event continues for an hour’s duration but does not necessarily stop after one hour. This means that only the duration meaning of a *for*-PP as used

in (20a) is relevant. The *for*-PP in (20b) is irrelevant because *for a few minutes* refers to the duration of the resultant state of an achievement, namely, his absence from the room. In (19a), *for 50 years* indicates a scope meaning rather than a duration meaning and hence is clearly not related to the test for telicity.

- (20) a. I cried **for days** [...]
 b. He left the room **for a few minutes**.
 c. No doubt: Burgundy was having its hottest summer **for years**.
 d. **For years** he was considered a ‘promising actor’ [...]
 e. He was jailed **for 18 months** [...]

To explain the contrast in (19), the distinction between unaccusatives and unergatives is also useful.⁴⁸ According to Levin & Rappaport Hovav (1995:3), “an unaccusative predicate is one that takes an internal argument but no external argument” while an unergative predicate takes an external argument as subject. In (19) *evaporated* is an unaccusative predicate, with a theme (i.e. *brandy*) as its sole argument. Consequently *brandy* in (19a) is an internal rather than external argument, even though it appears in the subject position. This alternative explanation provides further evidence in favour of our claim that external arguments do not contribute to telicity. Example (21) shows that bare plurals can indeed co-occur with an *in*-PP.

- (21) Opinion poll leads can evaporate overnight.
 (22) a. He drank brandy *for/*in* several hours.
 b. He drank a gallon of brandy *in/*for* several hours.

In this sentence, the subject NP is a bare plural. Nevertheless, the adverbial *overnight* can be replaced with *in an hour* quite felicitously. If we take the unaccusative/unergative distinction into account, the contrast in (19a-b) would then be parallel to that in (22a-b).

As noted in section 3.1, mass nouns or bare plurals are ambiguous between existential and generic readings. In an existential reading, mass nouns and bare plurals have a definite referent rather than an indefinite referent (cf. Carlson 1977; Dowty 1979). Consider the following examples (Dowty 1979:83–84):

- (23) a. **Tyrants** ruled Wallachia for 250 years.
 b. **Elephants** are quite easily trained.

In (23a), some particular tyrants, not tyrants in general, are clearly referred to, even though the NP is a bare plural. This is in contrast with the bare plural *elephants* in (23b), which has to be taken as referring to elephants in general rather than a particular group of elephants (cf. Dowty 1979:84). By the same token, the mass noun *brandy* in (19a) necessarily has an existential reading. It has specific reference, namely, the brandy that evaporated from those barrels.⁴⁹

We briefly discussed Verkuyl's (1989) assertion concerning external arguments in section 3.1. Verkuyl (1993:23) claimed, based on the contrast between sentences like those in (24), that "the subject-NP plays a decisive role in aspect construal." Dowty (1979:63) also argues that "if an indefinite plural occurs even as the subject of an achievement, the sentence is acceptable with durative adverbials" (e.g. 24a).

- (24) a. For months **patients** here died of jaundice.
(Verkuyl 1993:23)
- b. ***These two patients** died of jaundice for months. (*ibid*)
- (25) a. *jiucheng ganran bingdu zhe shu-tian*
90% infect virus person a-few-day
nei ji gao buzhi
within then end-up no-cure
"90% of those infected with the Ebola virus die in a few days"
- b. *huanzhe ji-ri zhinei jiu hui da chuxue*
patient a-few-day within then will large bleed
er wang
then die
"Patients (of the disease) die of bleeding in a few days"
- c. Nikki Lauda won the Monaco Grand Prix for several years.
(Moens & Steedman 1988:21)

The *for*-PP in (24a) clearly indicates a scope meaning, because it is plausible to say *For months [patients died of jaundice in a few days]*. In this rewritten example, the duration expressed by the *in*-PP (i.e. *in a few days*) is within the scope indicated by the *for*-PP (i.e. *for months*). Situations with [-count] external arguments can indeed take an *in*-PP, as shown in (25a-b). (24b) is unacceptable simply because the situation described is not repeatable. Once someone dies, they are dead. Repeatable achievements, in contrast, can indeed

take a *for*-PP felicitously, as shown in (25c), because *for*-PPs may coerce an aspectual shift at the clause level (see section 3.4.3). The resulting situation is a derived ‘iterative achievement’ (see section 3.5).

In Chinese, the effect of NP arguments is more subtle, because a bare noun can be understood either as specific or as non-specific (e.g. *renmen* can refer to a specific group of people or to people in general),⁵⁰ and because the structure *verb+bare noun* (e.g. *changge* ‘sing (songs)’) has two possibilities: the object may denote a specific individual (*sing a/the song(s)*), or alternatively it can be considered as part of the verb phrase, i.e. incorporated into the verb (*sing*).⁵¹ In short, a [–count] NP in Chinese always occurs in its bare form, but this does not mean that a bare noun is always [–count]. The (non-)specificity of a bare noun depends on the additional information provided by its context. The specificity of an NP can be made explicit by determiners like *zhe(xie)* ‘this/these’ and *na(xie)* ‘that/those’, or by verbal classifier phrases.

To test rules 3 to 5 in Chinese, a segment of 5,826 characters (File 9557101) was selected from the Weekly corpus for further processing, following the same procedure as used on the FLOB sample. The result is given in Table 3.8. In the table, patterns 1–3 show that when internal arguments are optionally absent, verbs alone determine situation types, irrespective of the nominal features of external arguments. Patterns 4–5 show that with [+telic] verbs (or more precisely, accomplishment verbs), situation types depend upon the nominal features of internal arguments. Patterns 6–7 show that [–telic] verbs always result in atelic situations, irrespective of the nominal features of NP-arguments. This is different from the pattern in English because Chinese does not have $PPs_{[Goal]}$ (see the discussion of rule 6). When RVCs are used, basic verbs are turned into derived achievements at the nucleus level (cf. section 3.4.1). The absence of external arguments in the pattern in pattern 8 indicates that they do not affect situation types, irrespective of whether the NPs are [+count] or [–count]. Here are some examples:

- (26) a. *ta laihui zou-le (yi-ge xiaoshi)*
 he back-and-forth walk-ACTL (one-CLF hour)
 ‘He walked back and forth (for an hour)’
 $NP_{[+count]} + Verb_{[-telic]} \Rightarrow Core_{[-telic]}$

Table 3.8. Situation types in the Weekly corpus sample

Sentence patterns	[+telic]	[-telic]
1. NP _[+count] +Verb _[+telic]	7 100%	0 0%
2. NP _[+count] +Verb _[-telic]	0 0%	24 100%
3. NP _[-count] +Verb _[-telic]	0 0%	1 100%
4. NP _[+count] +Verb _[+telic] + NP _[+count]	72 100%	0 0%
5. NP _[+count] +Verb _[+telic] + NP _[-count]	0 0%	1 100%
6. NP _[+count] +Verb _[-telic] + NP _[+count]	0 0%	6 100%
7. NP _[+count] +Verb _[-telic] + NP _[-count]	0 0%	2 100%
8. Verb _[+telic] + NP _[+count]	3 100%	0 0%
Total	82	34

- b. *zuifan (wu-fenzhong nei) taopao-le*
 criminal (5-minute within) escape-ACTL
 “The criminal escaped (in 5 minutes)”
 NP_[+count]+Verb_[+telic]⇒Core_[+telic]
- c. *zuo'an-fenzi (zai shi-fenzhong nei) xiaochu-le*
 criminal (in 10-minute within) remove-ACTL
jiaoyin
 footprint
 “The criminal removed his footprints (in 10 minutes)”
 NP_[+count]+Verb_[+telic]+ NP_[+count]⇒Core_[+telic]
- d. *zhe-xiang keyan chengguo (duo-nian lai)*
 this-CLF research outcome (many-years since)
tianbu-le guojia kongbai
 fill-ACTL country gap
 “The result of his research filled the gaps in this country (for many years)”
 NP_[+count]+Verb_[+telic]+ NP_[-count]⇒Core_[-telic]

As noted above, a situation with a [-telic] verb in English is normally atelic, but the situation changes if there is a prepositional phrase specifying a final

spatial endpoint. A PP-argument used in the spatial dimension can be a PP_[Goal], as in (27a), a PP_[Locative], as in (27b) or a PP_[Directional], as in (27c) (cf. Smith 1997). Only PPs_[Goal] change the telicity value of situations with [–telic] verbs from minus to plus. PPs_[Locative] and PPs_[Directional] do not have such an effect. The role of PPs_[Goal] can be expressed as

Rule 6: NP+Verb_[–telic]+PP_[Goal] ⇒ Core_[+telic]

Compare the following examples:

- (27) a. He got up and walked **to the door** (*for/in 10 minutes).
 b. Then we walked side and side **along the wall** (for/*in 10 minutes).
 c. She walked briskly **towards Upper Street** (for/*in 10 minutes).

The *in/for*-adverbial tests show that (27a) is telic while (27b) and (27c) are atelic. These sentences all have the same [–telic] verb *walk*, and the only difference lies in the features of their PP-arguments. Evidently, it is the PP_[Goal] that has contributed to the [+telic] value of (27a). A commonly recognised PP_[Goal] is *to*-PP (cf. Vendler 1967; Smith 1997). To test the reliability of rule 6, the co-occurrence of motion verbs with *to*-PPs in FLOB was examined.⁵² There are 134 such instances in the corpus, and it was found that each of them can take an *in*-PP felicitously at the core level, whether the verb is [+telic] (as in 28a) or [–telic] at the nucleus level (as in 28b). This provides evidence that rule 6 is valid in English. Interestingly, some directional adverbials have an effect similar to that of PPs_[Goal] in that they also change the telicity value of a situation, as shown in (29):

- (28) a. She **disappeared** to the kitchen.
 b. He **strolled** to the door.
- (29) She walked **home/downstairs** (in/*for five minutes).
 (Brinton 1988: 51)

In Chinese, however, there are only PPs_[Locative] (e.g. 30a) and PPs_[Directional] (e.g. 30b), since goals are normally indicated by RVCs (e.g. 30c). As such, rule 6 does not apply to Chinese. Consider the following examples:

- (30) a. **Yang Bingming (yi-ge xiaoshi nei) zai*
 *Yang Bingming (one-CLF hour within) in
jizhen shang guang-le
 market-town in stroll-ACTL
 *‘‘Yang Bingming strolled in the market town (in an hour)’’

- b. **(yi-ge xiaoshi nei) gan-wang-le*
 *(one-CLF hour within) rush-towards-ACTL
huochezhan
 railway-station
 *(‘They) rushed towards the railway station (in an hour)’
- c. *liang ren (yi-ge xiaoshi nei) gan-dao-le*
 two person (one-CLF hour within) rush-arrive-ACTL
shi duo gongli yuan de yi-ge jizhen shang
 ten more km far GEN one-CLF market-town on
 ‘The two of them rushed to the market town more than 10 km away
 (in an hour)’

It is expected that the PP_[Locative] *zai jizhen shang* ‘in the market town’ and the PP_[Directional] *wang huochezhan* ‘towards the railway station’ do not change the telicity value of (30a) and (30b), therefore these two situations are incompatible with *in*-PPs. (30c) is a telic situation, but the change in its telicity value is attributable to the RVC *dao* ‘to reach’, that is, *gan-dao* is a derived achievement verb (cf. section 3.4.1).

3.4.3 Clause level composition

The telicity and boundedness values of core-level situations may also be changed by non-arguments such as peripheral adjuncts and viewpoint aspect at the clause level. The roles of contributing elements can be expressed as follows:

Rule 7: Core_[-bounded] + *for-PP/from...to* ⇒ Clause_[+bounded]

Rule 8: Core_[+telic] + *for-PP/from...to* ⇒ Clause_[-telic]⁵³

Rule 9: Core_[±bounded] + verbal classifier phrase ⇒ Clause_[+bounded]

Rule 10: Core_[+telic] + progressive ⇒ Clause_[-telic]

Rules 7 and 8 show that the temporal adverbials like *for-PPs* and *from...to* play the double roles of (i) specifying a temporal endpoint for a [-bounded] situation and (ii) stripping a telic situation of its final spatial endpoint if the endpoint falls beyond the specified time frame.

Table 3.9. Distribution of *for*-PPs/*from...to* in the corpora

		ILS	SLS	ACT	SEM	ACC	ACH	Total
<i>for</i> -PP	FLOB	38 18.8%	19 9.4%	99 49%	1 0.5%	8 4%	37 18.3%	202 100%
	Weekly	3 3.3%	2 2.2%	61 66.3%	4 4.3%	5 5.4%	17 18.5%	92 100%
<i>from...to</i>	FLOB	7 35%	3 15%	10 50%	0	0	0	20 100%
	Weekly	0	1 16.7%	3 50%	0	0	2 33.3%	6 100%

These two rules were tested against the FLOB and Weekly corpora used in this book. The distribution of *for*-PPs/*from...to* is given in Table 3.9. As rule 7 shows, *for*-PPs/*from...to* function to provide a specific time frame. Therefore all core-level basic situation types with the feature values of [–bounded] and [–telic] — 73 states (including ILSs and SLSs), 173 activities and five semelfactives — are turned into temporally bounded situation types at the clause level. The following examples illustrate rules 7 and 8.

- (31) a. He was chairman from '81 to '85.
 b. They were silent for a while.
 c. *lian-le zhengzheng yi-nian, Yang Bingming*
 practise-ACTL whole one-year, Yang Bingming
kuai chushi le
 soon finish-apprenticeship COS
 “Having practised for a whole year, Yang was soon to finish his apprenticeship”
 d. *da-le ni ji-tian?*
 beat-ACTL you how-many-day
 “For how many days did they beat you?”
- (32) They wrote from eight-thirty in the morning till twelve, and again from four till six.
- (33) I stood and read the menu for a while, discovering it served mainly hamburgers.

In (31a) and (31b), for example, *He was chairman* and *They were silent* are an open-ended ILS and SLS respectively, but *from '81 to '85* and *for a while* bound

them temporally and turn them into a ‘bounded ILS’ and a ‘bounded SLS’ respectively at the clause level. Similarly in (31c) and (31d), the activity *lian* “practise” and the semelfactive *da* “beat” are temporally unbounded, but when *for*-PPs are used, they have a temporal boundary and become a ‘bounded activity’ and a ‘bounded semelfactive’ respectively. On the other hand, as rule 8 shows, when an accomplishment takes a *for*-PP/*from...to*, its final spatial endpoint is stripped if the endpoint goes beyond the specified time frame. In (32), for example, the discourse suggests that the writing event is an accomplishment, but the *from...to* expressions bound the telic situation before its final spatial endpoint is achieved. In other words, the writing event is not accomplished within the specified time frame and is thus turned into a bounded activity at the clause level. However, rule 8 only applies to *some* accomplishments. For repeatable accomplishments whose endpoint falls within the specified time frame, *for*-PPs/*from...to* do not remove their final spatial endpoint but rather give them an iterative reading. In our corpora, there are 13 accomplishments taking *for*-PPs/*from...to*, but rule 8 only applies to six instances (two in English and four in Chinese). The others are still telic situations with iterative readings at the clause level. For example, in (33), the conjoined second clause suggests that the menu-reading event was accomplished, though it is not clear whether it was repeated within the specified time frame.

The hypothesis that a *for*-PP may function to trigger a situation type shift from accomplishment to activity at the clause level explains the felicitous co-occurrence of some core-level accomplishments with both *in*-PPs and *for*-PPs, as observed by Dowty (1979:61):

- (34) a. He read a book *for/in* an hour.
 b. She combed her hair *for/in* five minutes.

Table 3.10. Distribution of verbal classifier phrases in the corpora

Corpus	ACT	SEM	ACC	ACH	Total
FLOB	25 30.9%	8 9.9%	22 27.1%	26 32.1%	81 100%
Weekly	23 41.8%	10 18.2%	15 27.3%	7 12.7%	55 100%

Rule 9 shows that verbal classifier phrases (e.g. *once*, *twice* and *six times*) have the same delimiting effect as *for*-PPs/*from...to*. The frequencies of verbal

classifier phrases found in the two corpora are given in Table 3.10.⁵⁴

For accomplishments and achievements, their [\pm bounded] value will not change when they are repeated for a specified number of times. For example, (35a) and (36a) have a temporal boundary as definite as, though not the same as (35b) and (36b). Therefore, 70 situations of these two types are irrelevant to rule 9 and thus can be excluded from the analysis.

On examination, it is found that all of the remaining situations, namely, 48 activities and 18 semelfactives, have a temporal boundary at the clause level. As semelfactives shift between single event and multiple event readings (cf. section 3.3.1), they can be either [+bounded] or [-bounded]. The event of *stabbing* as in (37a), for example, can occur just once or repeatedly. But when it is delimited by the verbal classifier phrase *six times*, it has a definite temporal boundary as expected. The activity *xunshi* ‘to look around’ as in (37b) is intrinsically [-bounded]. But when it is delimited by the verbal classifier phrase *yi-fan* ‘once’, a temporal boundary is attached to it and the activity becomes temporally bounded at the clause level. The effect of verbal classifier phrases is more obvious in Chinese, because the aspect marker *-le* is sensitive to a final endpoint, either temporal or spatial (cf. section 4.1.3). This contrasts strikingly with the simple aspect in English. For example, if the verbal classifier phrase *six times* in (37a) is removed, the English sentence is still felicitous; but if *yi-fan* ‘once’ in the Chinese example in (37b) is removed, (37b) becomes unacceptable. This is because *-le* in Chinese is sensitive to a temporal/spatial endpoint while a verbal classifier provides a temporal endpoint (see section 4.4 for further discussion).

- (35) a. She read it **once**.
b. She read it **three times**.
- (36) a. Rovers lost the ball **twice**.
b. Rovers lost the ball **5 times**.
- (37) a. A 20-year-old man who stabbed his love rival **six times** was sent to a young offenders’ institution for six years yesterday.
b. *na hanzi zuoyou xunshi-le yi-fan,*
that man left-right look-around-ACTL one-CLF,
disheng shuo [...]
low-voice say
‘That man looked around, and said in a low voice [...]’

Rule 10 shows that viewpoint aspect also participates in the composition of situation aspect at the clause level. There are 88 instances of the progressive *zai* in the Weekly corpus, which serve as the basis for the test. The progressive *zai* only occurs with dynamic situations (cf. section 3.2.1), as can be seen in Table 3.11.

Table 3.11. Distribution of the progressive in the Weekly corpus

	Situation types					Total
	SLS	ACT	SEM	ACC	ACH	
Frequency	2	73	2	7	4	88
	2.3%	83%	2.3%	7.9%	4.5%	100%

As the progressive only changes the telicity value from plus to minus, atelic situations are irrelevant. Of the 88 situations taking the progressive *zai* in the Weekly corpus, eleven are [+telic] at the core level. But when they are presented with the progressive aspect, the final spatial endpoints of these situations are all excluded. Therefore, the progressive functions to trigger a situation type shift and coerce a telic situation into a derived activity at the clause level. Consider the following examples:

- (38) a. *Meiguo zhengfu zhengzai zhengli yi-fen [...]*
 U.S. government PROG arrange one-CLF
dui Ri maoyi zhicai qingdan
 against Japan trade sanction list
 “The US Administration is preparing a list for trade sanctions against Japan”
- b. You are writing a crime thriller and want to bump off a victim with a spectacular poisoning.

At the core level, the situations of *the US Administration preparing a list* and *you writing a crime thriller* are accomplishments with a final spatial endpoint. In (38b), for example, when the novel is completed, the writing event is accomplished. But when these situations take the progressive, they become atelic because their final spatial endpoints are excluded and no longer available at the clause level. In fact, as Comrie (1976:47) suggests, “it is possible to state explicitly that the terminal point was never reached, as in *Mary was*

singing a song when she died.” In other words, these core-level telic situations are deprived of their final spatial endpoints and thus coerced into derived activities at the clause level (cf. section 3.5).

Chinese is rich in delimiting devices. As well as those discussed above, the *de* resultative structure and the constructions of *ba/bei* also function to delimit situations (cf. Yang 1995: 78), which can be expressed as:

Rule 11: Core_[-result] + *de*-construction \Rightarrow Clause_[+result]

Rule 12: Core_[-result] + *ba/bei*-construction \Rightarrow Clause_[+result]

The structure *verb+de+complement* can denote either resultativeness (e.g. *da de toupoxueliu* “beat till one bleeds”) or manner (e.g. *chang de buhao* “not sing well”). Only resultative *de*-constructions are relevant here. A total of 41 such instances were found in the Weekly corpus, of which nine are SLs (e.g. *xia de bu gan kensheng* “be too scared to speak”), 22 are activities (e.g. *ku de siquhuolai* “to cry oneself half dead, to cry one’s heart out”), nine are semelfactives (e.g. *da de wo bu neng dong* “(They) beat me so badly that I could not move”) and one is an accomplishment (e.g. *ba yi-guo shui shao de guntang* “(He) boiled a pot of water to boiling point”). All of the verb classes involved in resultative *de*-constructions have the features [+dynamic] and [-result]. This is as expected. ILS verbs cannot occur in this structure because *de* denotes the result state caused by an action, which is necessarily dynamic; achievement verbs cannot occur with *de* because they already encode a result themselves. At the clause level, all of the 41 [-result] verbs occurring in resultative *de*-structures produce situations with a result attached to them (e.g. the attested example 39a), thus they can take *in*-PPs felicitously and cannot be contradicted, as shown in the modified example (39b).

- (39) a. (*wu-fenzhong nei*) *dou de Xiao Mao zhongyu*
 (five-minute within) amuse DE Xiao Mao at-last
kaihuaidaxiao
 laugh-heartily
 “(She) amused Xiao Mao so much that he burst into laughter at last
 (within 5 minutes)”
- b. *dou de Xiao Mao kaihuaidaxiao*,
 amuse DE Xiao Mao laugh-heartily,
 (**keshi mei dou-cheng*)
 (*but not amuse-succeed)
 “(She) amused Xiao Mao so much that he burst into laughter at last
 (*but she didn’t succeed)”

Table 3.12. *Ba/bei* constructions in the Weekly corpus

<i>ba/bei</i>	ACT (-de)	ACT (+de)	SEM (-de)	SEM (+de)	ACC	ACH	Total
<i>ba</i>	5 4.3%	6 5.1%	2 1.7%	2 1.7%	10 8.6%	91 78.4%	116 100%
<i>bei</i>	44 17.2%	3 1.2%	2 0.8%	4 1.6%	15 5.9%	187 73.3%	255 100%

In Chinese, *ba* is an object modifier that preposes a direct object to the preverbal position (compare *ban-le shouxu* vs. *ba shouxu ban-le* “went through formalities”), and *bei* represents the passive construction (e.g. *bei yifa chengban* “be punished according to law”). Sentences with *ba/bei* structures always denote delimited situations with the implication of the successful achievement of a result. In this sense, they have a function similar to that of RVCs. There are 116 instances of the *ba* structure and 255 instances of the *bei* structure in the Weekly corpus, which are distributed as shown in Table 3.12.

As achievements and situations taking the resultative *de* structure already encode a result, 99 instances of *ba* and 194 instances of *bei* can be excluded from the analysis. As situations encoding a result cannot be contradicted by a conjoined clause (cf. section 3.2.4), the contradiction test was used to discover resultatives. The test shows that none of the remaining 17 situations with *ba* and 61 situations with *bei* can be contradicted. Consider the examples in (40) and (41) below:⁵⁵

- (40) a. *ye ba ta yueshu-le ji-ge zhongtou*
 also BA him detain-ACTL a-few-CLF hour
 (**keshi mei yueshu-cheng*)
 (*but not detain-succeed)
 “(We) also kept him in custody for several hours (*but didn’t succeed)”
- b. *Jiang Xiaoming ba ta da-le dun*
 Jiang Xiaoming BA him beat-ACTL CLF
 (**keshi mei da-dao*)
 (*but not beat-succeed)
 “Jiang Xiaoming gave him a beating (*but didn’t succeed)”

- c. *ba zhe-ge yisi gaosu-le Zhang*
 BA this-CLF meaning tell-ACTL Zhang
 (**keshi mei gaosu-wan*)
 (*but not tell-finish)
 “(Yang) told Zhang about it (*but didn’t finish it)”
- (41) a. *ta zuowei renzhi bei Jiang Xiaoming yi-huo*
 he as hostage PASS Jiang Xiaoming one-group
kouya (**keshi mei kouya-cheng*)
 detain (*but not detain-succeed)
 “He was detained as a hostage by Jiang Xiaoming and others (*but they were not successful)”
- b. *jiantou turan bei ren qing-qing dian-le*
 shoulder suddenly PASS person gently touch-ACTL
yi-xia (**keshi mei dian-dao*)
 one-CLF (*but not touch-reach)
 “Suddenly (his) shoulder was touched gently (*but the touch missed him)”
- c. *Gen’en yisheng bei sha hou* (**meiyou si*)
 Gorn doctor PASS kill after (*not die)
 “After Dr. Gorn was killed (*he didn’t die)”

At the core level, *yueshu* “to keep in custody” (40a) and *kouya* “to detain” (41a) are activities, *da* “to beat” (40b) and *dian* “to touch” (41b) are semelfactives, while *gaosu* “to tell” (40c) and *sha* “to kill” (41c) are accomplishments. None of these situations encodes a result. But when the structures of *ba* and *bei* are used, they all encode a result and can no longer be contradicted.

Passives in English demonstrates a similar effect, as shown in (42):

- (42) a. [...] a police car was vandalised.
 b. A committee was appointed to report on the situation in 1901 [...]
 c. [...] the Norsk Hydro plant was attacked [...]

At the core level, *vandalise a car* is an accomplishment, and *appoint a committee* is an achievement while *attack a plant* is an activity. When these situations are presented with passive structures, they can no longer be contradicted at the clause level. Thus, you cannot say that a car was vandalised while asserting that it was still intact.

The effect of passives in English, however, is not as marked as in Chinese. For example, if (42c) is rewritten as *The terrorists attacked the Norsk Hydro plant*, the event still cannot be contradicted. Nevertheless, the difference in the effect of passives in Chinese and English is attributable to viewpoint aspect rather than passives *per se*. In English, the perfective meaning is most commonly expressed by the simple past (Brinton 1988:52) while in Chinese, the actual viewpoint marked by *-le* typically presents a situation perfectly (see chapter 4.1). In addition to presenting a situation in its entirety, the English simple past also provides a final spatial endpoint to a telic situation (completive reading) and a final temporal endpoint to an atelic situation (terminative reading). In contrast, the Chinese *-le* only presents a situation as a whole but does not provide any final endpoint. This is supported by the fact that the English simple past can be used in a [-telic] or even [-bounded] situation (e.g. *John loved Mary*) whereas in Chinese, simply adding *-le* to a [-bounded] situation normally does not produce a grammatical sentence. Compare **Yuehan ai-le Mali* Lit. “John loved Mary” vs. *Yuehan ai-le Mali san-nian* “John loved Mary for three years”. The second sentence is grammatical because a *for*-PP provides a temporal boundary to the situation.

The discussion in this section has shown that lexical-level verb classes determine a range of possible situation types that clauses may have, for clauses in which they occur. The specific situation type of a clause comes as a result of the interaction between verb classes and complements (nucleus-level), arguments (core-level) and non-arguments such as peripheral adjuncts and viewpoint aspect (clause-level).

3.5. Sentential level: situation types

Chinese and English have the same six basic types of situations at the sentential level: activities, semelfactives, accomplishments, achievements, ILSs and SLSs. Basic situation types share the same feature values with verb classes of the same label (see section 3.3). Except for accomplishments, all of the others have various derived situation types which vary from their basic types with respect to their durativity or boundedness value.⁵⁶ The salient features of these situation types are summarised in Table 3.13.

Table 3.13. Feature matrix system of situation types

Situation type		[±dyn]	[±dur]	[±bnd]	[±telic]	[±result]
ILS	basic	–	+	–	–	–
	derived	–	+	+	–	–
SLS	basic	±	+	–	–	–
	derived	±	+	+	–	–
ACC		+	+	+	+	–
ACT	basic	+	+	–	–	–
	derived	+	+	± ⁵⁷	–	–
SEM	basic	+	–	±	–	–
	derived	+	+	±	–	–
ACH	basic	+	–	+	+	+
	derived	+	+	+	+	+

The situation types discussed here are the final result of composition at the clause level. When basic states (ILS in 43 and SLS in 45) and activities (47) are temporally bounded by delimiting mechanisms, bounded states (ILS in 44 and SLS in 46 both delimited by a *for*-PP) and bounded activities (activity in 48 delimited by a *for*-PP) are the result. Derived activities can also be obtained from basic accomplishments delimited by *for*-PPs/*from...to* or the progressive (49). Accomplishments (50) do not have a derived situation type. Basic semelfactives have a single-event reading (51); when they occur with verbal classifier phrases or durative temporal adverbials, or when they take the progressive or durative aspect (see chapter 5), they become derived ‘iterative semelfactives’ (52). When achievement verbs (53) take plural [+count] NPs or verbal classifier phrases, derived ‘iterative achievements’ result (54). The interaction between situation aspect and viewpoint aspect in Mandarin Chinese will be further explored in chapters 4 and 5.

The following are examples of these situation types. In these examples, the Chinese and English sentences are equivalents.

Basic ILS

- (43) a. Chinese: *ta ai Mali*
 he love Mary
 b. English: He loved Mary.

Derived ILS (basic ILS ⇒ derived ILS)

- (44) a. Chinese: *ta ai Mali ai-le san-nian*
 he love Mary love-ACTL 3-year
 b. English: He loved Mary for three years.

Basic SLS

- (45) a. Chinese: *Yuehan hen shengqi*
 John very angry
 b. English: John was angry.

Derived SLS (basic SLS ⇒ derived SLS)

- (46) a. Chinese: *Yuehan sheng-le yi-ge xiaoshi de qi*
 John got-ACTL one-CLF hour PRT anger
 b. English: John was angry for an hour.

Basic activities

- (47) a. Chinese: *ta tui-le yi-liang che*
 he push-ACTL one-CLF cart
 b. English: He pushed a cart.

Derived activities (basic ACT ⇒ derived ACT or ACC ⇒ derived ACT)

- (48) a. Chinese: *ta tui che tui-le yi-ge xiaoshi*
 he push cart push-ACTL one-CLF hour
 b. English: He pushed the cart for an hour.
- (49) a. Chinese: *ta xie lunwen xie-le yi-ge xiaoshi*
 he write thesis write-ACTL one-CLF hour
 /*ta zai xie lunwen*
 /he PROG write thesis
 b. English: He wrote his thesis for an hour/was writing his thesis.

Accomplishments

- (50) a. Chinese: *ta xie-le yi-feng xin*
 he write-ACTL one-CLF letter
 b. English: He wrote a letter.

Basic semelfactives:

- (51) a. Chinese: *dengta shan-le yi-xia*
 beacon flash-ACTL one-CLF

- b. English: The beacon flashed once.

Derived semelfactives (basic SEM \Rightarrow derived SEM)

- (52) a. Chinese: *ta kesou ke-le 5 fenzhong*
 he cough cough-ACTL 5 minute
/san-ci/zai kesou
 /3-CLF/PROG cough
 b. English: He coughed for 5 minutes/three times/was coughing.

Basic achievements

- (53) a. Chinese: *ta ba chabei da-po-le*
 he BA cup hit-broken-ACTL
 b. English: He broke the cup.

Derived achievements (basic ACH \Rightarrow derived ACH)

- (54) a. Chinese: *ta zhuyi-dao-le wenzhang zhong*
 he notice-RVC-ACTL paper middle
de san-chu cuowu
 GEN 3-CLF error
 b. English: He noticed three errors in the paper.

This chapter was concerned with situation aspect. The two-level model developed here provides a more refined aspectual classification and gives a more systematic account of the compositional nature of situation aspect than previous proposals. Mourelatos' (1981:199) criticism of Vendler and Kenny also applies to all of the models reviewed so far in this book, though it should be noted that Mourelatos himself does not provide an explanation of the determinants of situation aspect. Vendler (1967) is confined to the lexical level whereas Verkuyl (1993) works only at the core level. While Smith (1997) and Shirai (1991) utilise a classification system similar to ours, they do not differentiate between the lexical and sentential levels of situation aspect. In fact, with their classification systems (note the difference between Shirai's definition of *result* and ours, see section 3.2.4), it is quite impossible to treat verb classes and situation types separately. However, the distinction between their one-level approach and our two-level approach is marked as a two-level approach can model situation aspect in a more structured way and provide a clearer account of the composition of situation aspect. The dichotomous treatment of states in our model also gives a unified explanation of the

felicitous co-occurrence of some states with the progressive and imperatives, which is absent in previous proposals. Last but not least, our model, which is based on and verified by corpus data, represents an innovative attempt to marry a corpus-based approach and a theory-driven approach to aspect. In the following two chapters we will explore the perfective and imperfective aspects in Chinese within the theoretical framework presented in chapter 2.

Notes

1. This chapter is based on Xiao & McEnery (2004).
2. Thus a punctual situation like *winning a race* may in reality relate to several milliseconds, but it is conceived of as having no inherent duration. In Siewierska's (1991:232, note 14) terms, it is "the conceptualisation of the event" that matters. Smith (1988:225) also argues that "one would not say that *Mary climbed a tree* if she were suddenly wafted on the top of the tree."
3. We are grateful to a reviewer of our manuscript for reminding us of this distinction.
4. Smith (1991:30, 1997:20) does not assign any telicity value to states because she thinks that a final endpoint is irrelevant to this situation type (see section 1.2). But as will become apparent in section 3.4.3, states may also have a *final temporal endpoint* when they are delimited by devices like temporal adverbials at the clause level, as in examples (31a-b) in this chapter.
5. The starting and terminating points of a state involve change (i.e. *ingressive* and *egressive* dynamicity). As such, Comrie (1976:49) suggests that states "may or may not involve change." But this claim is arguable, since these changing points are not part of a stative situation *per se* (cf. Smith 1997:32).
6. As will become apparent in section 3.3.3, there are two types of states, 'individual-level states' (ILSs) and 'stage-level states' (SLSs). The latter are related to the *stages* of an individual and thus can take the progressive.
7. Following van Valin (1993), Yang (1994) argues that the progressive "is universally accepted as a test for determining stativity" and finds that it also works in Korean.
8. Bach (1981, 1986) refers to this type of situation as a 'dynamic state'.
9. However, we cannot say that verbs that cannot take the progressive *zai* are necessarily stative, because verbs encoding a result are also incompatible with the progressive (e.g. *da-po* "to break"). See section 5.2 for a further discussion of the interaction between situation aspect and the pro-gressive *zai*.
10. For example, in *When he came in, Harry was ill*, the punctual reference time of *his coming in* can be situated in the time frame provided by the state of *Harry's being ill*. This means that the punctual reference time overlaps with the stative situation. Note, however, that the overlap relation is not necessarily the only interpretation in some cases (e.g. *When*

I came in, Fred knew the answer).

11. The symbol # indicates that the sentence is unacceptable for the intended meaning. In this case, the sentence is unacceptable if *draw a circle* is considered as an accomplishment; however, as a *for*-adverbial has the effect of coercing a basic accomplishment into a derived activity at the clause level (see section 3.4.3), the sentence is all right if *draw a circle* is interpreted as an activity.

12. Achievements taking the progressive often denote futurity, as in *The train is leaving in 5 minutes*.

13. Comrie (1985:30) notes that “in English, it is sometimes possible to collocate punctual time adverbials with durative situations in order to give the time point of the beginning of the durative situation.”

14. Dahl (1981:80) notes that the distinction formulated by Aristotle has been “re-discovered” and renamed several times, thus the terminology is chaotic. Readers can refer to Dahl’s quotation of Anderson (1972) for a more comprehensive list.

15. In her earlier works, though, Smith (1988:217) followed Comrie’s (1976) and defined telic events as consisting of “a process and an associated outcome”, and the “process component of a Telic event is essential to the very notion of the event.” Therefore, according to Smith (1988), a telic situation must meet three criteria: completion, duration and non-detachability between the process and the outcome. As noted earlier, Comrie’s definition of telicity is problematic. As such, Smith’s change of position is justified.

16. As we will see in section 3.2.5, it is necessary to differentiate between a final spatial endpoint and a final temporal endpoint. Semelfactives only involve a final temporal endpoint.

17. Another example given by Smith for accomplishment is *break a pot*, but we cannot see any difference between *break a pot* and her achievement *break a cup*. Also, it is difficult to see why *wrinkle a dress* should appear under a different category from *tear a paper*.

18. In the real world, though, a punctual situation may indeed take a few split seconds, this idealised situation is labelled as [-durative] according to linguistic conventions.

19. Lehmann (1999:47) observes that “there are two alternative conceptions of a punctual situation” with respect to telicity: the momentary view – “it is bilateral telic”, and the transgressive view – “start and end of the punctual situation coincide.”

20. Brinton (1988:57) herself, though, follows Comrie’s (1976) definition of telicity and assigns [(+)telicity] to achievements, which means [+telicity] of achievements can be cancelled.

21. In Olsen’s (1994) privative analysis of temporal features, semelfactives are also ‘unmarked’ for [\pm telic], which means semelfactives may be [+telic] or [-telic] depending on pragmatic contexts.

22. Except for Comrie (1976), there seems to be a unanimous agreement that achievements are telic. This is true, because, as will be discussed later (cf. sections 3.3.2 and 3.5), achievements necessarily involve a final spatial endpoint.

23. [-Count] NPs like mass nouns and bare plurals share the property of cumulative or

divisive reference (cf. Link 1983; Bach 1986; de Swart 1993). For example, *milk* plus *milk* is still *milk*, part of *running* is still *running*. In contrast, [+count] NPs do not have such properties, e.g. *a letter* plus *a letter* means *two letters*, and part of *running a mile* is no longer *running a mile*.

24. The hierarchical structure of the three endpoint-related features reminds us of the Jacobsonian/Prague School concept of markedness. According to the formal definition of markedness provided by Jakobson (1971), “The general meaning of a marked category states the presence of a certain (whether positive or negative) property A; the general meaning of the corresponding unmarked category states nothing about the presence of A, and is used chiefly, but not exclusively, to indicate the absence of A” (cited from Kučera 1982: 168). While markedness in a narrowed sense (i.e. “statement of A” vs. “statement of non-A”) is operative, we maintain that markedness in a general sense (i.e. “statement of A” vs. “no statement of A”) does not apply to the three endpoint-related parameters, because [-result] in our model only means the absence of a result. While it allows both the values [+telic] and [-telic], telicity is at a lower level.

25. A third pattern, namely, the combination of [+dynamic], [-durative], [+bounded], [+telic] and [-result], is unattested even at the clause level. As a delimiting mechanism (e.g. *from 2 to 3 p.m.*) only provides a final temporal endpoint rather than a final spatial endpoint, they can only change the boundedness value but not the telicity value of a situation.

26. A verbal classifier phrase is similar to a nominal classifier like *ben* in *yi-ben shu* “a book”. The two differ in that a verbal classifier phrase refers to the count of actions while a nominal classifier refers to the number of an object.

27. Repetition of this kind is sometimes termed ‘series’ in the literature (e.g. Brinton 1988: 57)

28. Teng (1977: 4) and Ren (1991) observe that the sequence *verb+complement* could be reinterpreted as *manner+verb*.

29. The term *achievements* was actually coined by Ryle (1949: 149–153) for resultative verbs, which he also labeled “success words” or “got it words” in contrast to irresultative verbs (his “failure words” or “missed words”). There may be a process leading to the achievement of a result, but the *achievement* of that result is punctual. On Moens’ event nucleus, it is associated with the *culmination point*. Similar views can also be found in Biber et al. (1999: 474).

30. In addition to the four Vendlerian classes and the ‘dynamic’ discussed here, Carlson (1981) subdivides Vendler’s achievements into *momentaneous* and *achievement* proper. Bach (1986) also includes two different types of states (dynamic and static) in his six-way classification, which consists, in addition to the two types of states, of processes and some telic situations.

31. Carlson’s (1981: 39) three criteria for her aspectual classes are compatibility with momentaneous adverbials, the progressive, and durative adverbials.

32. Smith (1997: 293–294) notes the difference between these two types of states, but unfortunately she does not distinguish between them in her aspect model.

33. Chierchia (1995:176–223) identifies six properties of ILSs, which are not only helpful in differentiating ILSs from SLs, but also lend evidence supporting such a distinction.
34. ILSs do not have to be marked aspectually because they remain unchanged irrespective of time and space. As such, ILSs are referred to as an “atemporal state of affairs” in Bohnemeyer (2000).
35. Olsen (1994) argues that the feature combination of [+telic] and [+durative] in her privative feature system describes telic, “generally stative” situations, which means this type of situation is ‘unmarked’ for [±dynamicity] and thus can change its value depending on the context. Carlson (1977:448) even argues that stage-level states are “more event-like” than individual-level states: “they aren’t things that simply *are*; they are more akin to things that *happen*.”
36. Carlson (1981:36) notes that *be NP* taking the progressive can be systematically interpreted as *act like* (or *so as to be*) *NP*.
37. The temporary nature of stages is in line with the nature of the progressive. As Leech (1971:14) observes, “the most important function of the progressive aspect is to refer to temporary situations, activities, or goings-on.” Smith (1983:483–484) also suggests that when a state takes the progressive, it is presented as an event and carries the connotation of temporariness and limited duration.
38. In addition to dynamicity, the imperative has other semantic requirements such as ‘control’. Thus while *Listen!* is acceptable, **Hear!* is not. We will merely note this observation here as a further discussion of this is beyond the scope of this book.
39. The term NP argument in this book does not refer to a noun phrase alone. Rather it refers to a nominal phrase in a broad sense including, in addition to noun phrases, pronoun phrases and non-finite verb phrases that behave like a noun phrase.
40. While it is possible to use the verb classes, established in section 3.3, instead of the binary features such as [±telic] and [±bounded] in our mapping rules, this would make the formulations quite clumsy. For example, we would need to use “ILS, SLS, activity and semelfactive” to replace “verb_[-telic]”.
41. The nominal feature [±count] is related to NP-arguments. [+Count] NPs are singular or specific countable plurals, while [-count] NPs include mass nouns and non-specific bare plurals. [±Count] is similar to Smith’s (1997) count/mass opposition or Verkuyl’s (1993) [±SQA].
42. While it is possible to treat English particles such as *up*, *down*, *out*, *off*, *through*, *over* and *away* as completive RVCs, we consider them as directional RVCs in this book so that directional RVCs are treated consistently in English and Chinese. These particles, like directional RVCs in Chinese, can be mapped from the spatial domain upon the semantic domain (see section 4.4 for a further discussion).
43. Situations like *thought the accusation unfair* and *made her life insufferable* are irrelevant and were thus not counted.
44. It should be noted that verb reduplication is not confined to actualised situations alone. See section 4.3.

45. More precisely, only accomplishment verbs are relevant, because achievement verbs encode a result, which is not affected by arguments. The +/- notation should be understood as follows: whichever choice is made on the left of the \Rightarrow symbol, the same choice is made on the right.
46. Stative verbs are supposed to be irrelevant to a final spatial endpoint (cf. Verkuyl 1989:79; Tenny 1994:13).
47. We would like to thank Jim Miller for these examples.
48. We are indebted to an anonymous reviewer of our manuscript for reminding us of this alternative explanation.
49. In French, *brandy* in (19a) is translated as *du cognac*. The partitive *du* but not the definite article *le* is appropriate in this context because the brandy that evaporated from the barrels represents only some of the brandy in the world. Obviously, it is not likely that *all of* the brandy in the world evaporated from those barrels between, for example, 1900 and 1950. The use of the partitive *du* justifies our interpretation that *brandy* in (19a) has specific reference, as *du* is a short form of *de le* rather than *de un*.
50. The term *bare noun* is used because plural nouns in Chinese do not always take the plural suffix *-men*. For example, *xuesheng* without the plural suffix can denote either a singular concept (*student*) or a plural concept (*students*). In fact, only a minority of nouns, i.e. those denoting people, can take that suffix. Other nouns, even when they are intended as plural, are not obliged to take the plural suffix (e.g. **zuozi-men* “desks”).
51. Similar views can be found in Kang (1999:59), who argues that when a cognate object (e.g. *ge* “songs” in *changge* “to sing (songs)”) introduces “new information”, i.e. when it is modified by a quantifier (e.g. *chang liang-shou ge* “to sing two songs”), a telic reading becomes available. While it is not clear whether “new information” is relevant in this context, Tenny’s measuring theory certainly applies.
52. Only motion verbs are relevant because only these verbs co-occurring with *to*-PPs can be taken strictly in the spatial dimension. To make the data manageable, only motion verbs in the past tense were counted.
53. This rule only applies to some accomplishments. See discussions later in this section.
54. Only verbal classifier phrases indicating a definite number of iterations were counted, therefore expressions like *more than once*, *twice a week* and *several (many) times* were excluded.
55. The contradiction tests in the brackets did not appear in the original corpus examples.
56. Because the derived situation type of accomplishment has exactly the same feature values as their basic types (cf. 35a and 35b), these two are not differentiated.
57. Derived activities have the value of [\pm bounded] as they represent a complicated category. When basic activities are delimited by a specific time frame, they are [+bounded]; when accomplishment verbs take [-count] NPs or the progressive, the derived activities are [-bounded].

CHAPTER 4

The perfective aspects in Chinese

Having established a model of situation aspect, let us now move on to explore viewpoint aspects in Chinese. As noted in chapter 1, Chinese is a language with many markers used to express aspectual distinctions. Like many languages in the world (cf. section 2.5), Chinese draws a central distinction between the perfective and imperfective aspects. There are basically four perfective viewpoints in Chinese: (1) the actual aspect marked by *-le*, (2) the experiential aspect marked by *-guo*, (3) the delimitative aspect marked by verb reduplication, and (4) the completive aspect marked by resultative verb complements (RVCs). We will consider these viewpoints in turn.

4.1. The actual aspect: *-le*

In the literature on aspect in Chinese, with a few exceptions (e.g. Shi 1990; Mangione & Li 1993; Ross 1995), most scholars agree that the aspect marker *-le* signals perfectivity (e.g. Chao 1968:246; Chan 1980:47–61; Li & Thompson 1981:185; Tiee 1986:96; Zhang 1995:115; Christensen 1994:33–65; Smith 1997:263; Dai 1997:35; Henne et al. 1977:117).¹ However, with the exception of Dai (1997), all the researchers quoted above refer to this aspect marker either as “perfective *-le*” or as the “perfective aspect suffix” in parallel with the experiential aspect, the delimitative aspect and the durative aspect, as if *-le* alone signalled perfectivity in Chinese. But in fact, as argued in this book, the aspect marked by *-le*, together with the experiential aspect signalled by *-guo* (see section 4.2), the delimitative aspect marked by verb reduplication (see section 4.3) and the completive aspect marked by RVCs (see section 4.4), combines to constitute the perfective aspect in Chinese. Hence the aspect marked by *-le* should have a less exclusive name. In this book we will refer to this viewpoint as the ‘actual aspect’. As will be discussed later in this section, the actual aspect provides an external viewpoint from which a situation is presented as an actualised single whole. The aspect marker *-le* demonstrates the temporal features of *actuality* (section 4.1.4), *holisticity* (section 4.1.5) and *dynamicity* (section 4.1.6). But before these features are discussed in detail, we

will first clear away some confusion over the aspect marker *-le*, namely, (i) whether there is one or two *LEs* (section 4.1.1), (ii) whether the actual aspect presents a completed or terminated situation (section 4.1.2), and (iii) what the semantic constraints are on the interaction between *-le* and situation aspect (section 4.1.3).

4.1.1 The actual *-le* vs. the change-of-state (COS) *le*

In contrast to the generally unanimous agreement on the perfectivity signalled by *-le*, there is disagreement over whether there are two morphemes, i.e. the actual *-le* and the COS *le*,² or only one single morpheme *LE*. While the two-morpheme approach focuses on their differences in terms of syntactic distributions, semantic properties and etymological sources, the one-morpheme approach focuses on their semantic similarities. Huang (1987: 182–189), for example, favours the one-morpheme approach, maintaining that the semantics of completion expressed by the unified *LE* underlies both surface variants of the actual *-le* and the COS *le*. Following Huang (1987), Zhang (1995: 120) also supports the unified treatment of *LE* and describes its major functions as denoting a change of state by termination and establishing a boundary between two different situations,³ i.e. a resultant situation brought about by the effect of change is different from the situation prior to the change. However, despite their explicit support for the one-morpheme approach, both Huang (1987: 227) and Zhang (1995: 217) have to turn to the two-morpheme approach to explain the interchangeability of *-le* and *guo*. Consider the following pair cited from Huang (1987: 227):

- (1) a. *wo chi-guo fan le*
 I eat-RVC meal COS
 “I have had my meal already”
 b. *wo chi-le fan le*
 I eat-ACTL meal COS
 “I have had my meal already”

Zhang (1995: 129) asserts that *guo* and *-le* are interchangeable because the post-sentential *le* indicates a resultant state, which is more salient and makes the “experiential meaning” of *-guo* in (1a) irrelevant. This explanation actually relies on the differentiation between the actual *-le* and the COS *le* and turns to the two-morpheme approach.⁴

The two-morpheme approach is favoured in this book. As indicated above, the actual *-le* and the COS *le* differ in terms of syntactic distributions, semantic properties, and etymological sources. The terms *verb-final suffix -le* and *sentence-final particle le* (Li & Thompson 1981) illustrate well their difference in syntactic distribution. Syntactically, the actual *-le* occurs post-verbally while the COS *le* occurs in the post-sentential position. However, when an intransitive verb takes the suffix *LE*,⁵ we have to take into account the difference in the semantic functions of these two morphemes to determine which *LE* is following the verb. As will be discussed in section 4.1.4, the actual *-le* signals the actualisation of a situation with respect to a past, present or future reference time and presents the situation as a single whole. In contrast, the COS *le* mainly indicates a change into a new situation and signals its current relevance (cf. section 4.1.7).⁶ There are three possibilities for *LE* taking the sentence final position. It can be the COS *le* if the sentence only allows a change-of-state or current-relevance reading. It can be the actual *-le* if the sentence only conveys an actualised situation. Finally, it has the double function if the sentence has both COS and actuality readings (cf. Li & Thompson 1981:296).⁷ In this last case, the additional COS marker is absorbed into the first actual aspect marker, as Chinese “always avoids a repetition of the same syllable by way of haplogy: *-le le*”(Chao 1968:247).⁸

Comrie (1976:82) also observes that a differentiating feature of the actual *-le* is that in the negative, *mei(you)* “not” is used to replace *-le*, but the negative adverb occurs in the pre-verbal position,⁹ e.g. *ta mei(you) lai* “He didn’t come”. We shall extend Comrie’s observation further by assuming that all of the situations that can be negated by *mei(you)* are perfective (but not necessarily actualised), the COS *le* cannot be negated in this way. Consider the following examples:

- (2) a. *Zhang Zhiwei bing meiyou taotuo falü de*
 Zhang Zhiwei actually not escape law GEN
zhicai
 punishment
 “Zhang Zhiwei did not escape the punishment of the law”
- b. *Zhang Zhiwei taotuo-le falü de zhicai*
 Zhang Zhiwei escape-ACTL law GEN punishment
 “Zhang Zhiwei escaped the punishment of the law”

- (3) a. *women yijing yi-tian mei chifan le*
 we already one-day not eat-meal COS
 “We haven’t eaten for a day”
- b. *women yijing chi-le fan le*
 we already eat-ACTL meal COS
 “We have already eaten”

As the actual *-le* can be left out if a situation is negated by *meiyou* “not” (cf. section 5.5), when the modified example (2b) is negated, the actual *-le* is replaced by the pre-verbal negative adverb *meiyou*, as shown in attested example (2a). On the other hand, a comparison of attested examples (2a) and (3a) shows that the actual *-le* is replaced by the negator *mei* whereas the COS *le* is not affected.¹⁰

Historically, the actual *-le* and the COS *le* developed at different stages in the evolution of Chinese. The COS *le* in the sentence-final position is derived from the verb *liao* “to finish, to come to an end” (the same syllable with a different pronunciation) which is still current in modern Chinese, as in *siliao* “to settle out of court”. When its sentence-final function was well established, it also developed a use in which it appears directly after the main verb (whether or not it is sentence-final) signalling actuality. Therefore diachronically, the COS *le* developed earlier and gave rise to the actual *-le* (cf. Bybee et al. 1994:84–85; Wu 2000:378). It can be argued that this evolution chain provides evidence in favour of the two-morpheme approach: if the morphemes are the same, and one morpheme can function adequately, why is it necessary for the other to be derived?

Table 4.1. Frequency of *LEs*

Data	Total	<i>-le</i>		<i>le</i>		Double-role <i>le</i>	<i>-le/le</i>	
Weekly	1,340	1138	84.93%	175	13.06%	27	2.01%	6.503
C’s written	86	75	87.21%	11	12.79%	0	0	6.818

The distinction between the actual *-le* and the COS *le* is further supported by the quantitative data in the Weekly corpus. Of a total of 1,340 occurrences of *LE*, 1,138 (84.93%) are the actual *-le*, 175 (13.06%) are the COS *le*, and in 27 instances (2.01%) the morpheme denotes both actuality and COS meanings. The ratio of the actual *-le* over the COS *le* is 6.503. The higher frequency of the

former over the latter is predictable as the corpus used here mainly contains narrative texts, of which the perfective aspect is a prominent syntactic feature. This finding is in line with Christensen (1994), who observes a similar ratio of the actual *-le* over the COS *le* in written Mandarin Chinese narratives,¹¹ as shown in Table 4.1. The table shows that the actual *-le* is more productive than the COS *le* and the double-role *LE*. The chi-squared test shows that the difference in these two sets of data is not statistically significant at all (the chi-square value of 0.0202 for one degree of freedom) and thus can be ignored. Christensen's written data shows a slightly higher frequency of the actual *-le* because his data is purely narrative.

It can be seen from the above discussion that the actual *-le* is different from the COS *le* in many respects:

- **syntactically**, the actual *-le* appears in the verb-final position whereas the COS *le* occurs in the sentence-final position;
- **semantically**, the actual *-le* signals actuality whereas the COS *le* indicates a change of state;
- **historically**, the actual *-le* and the COS *le* developed at different stages of the evolution of the language;
- **empirically**, the actual *-le* is more productive than the COS *le*.

All of these argue strongly for the two-morpheme approach. In fact, this approach is adopted by most researchers (e.g. Chao 1968; Henne et al. 1977; Li & Thompson 1981; Smith 1997; Dai 1997). The problem with these authors, however, is that their discussions of aspect only involve the actual *-le* but do not include the COS *le*.¹² Dai (1997: 163), for example, explicitly claims that the aspect marker *-le* studied therein is “the post-verbal *-le* indicating completion of an action” as referred to by Lü (1981: 314–321). Although Smith (1991: 345, 1997: 266) realises that “some functions of the particle *le* may overlap in some ways with the aspectual system”, regrettably she does not attempt to explore the matter further.

A description of the aspectual system in Chinese should include “the particle *le*”, or more precisely, the COS *le*.¹³ The reasons for the inclusion are three-fold. Firstly, according to the strict definition of aspect (cf. Comrie 1976; Lyons 1977), the semantic notions like stativity, progressiveness, duration, completion, habituality, iteration, momentariness, inception, and termination all fall under the umbrella of aspectual analysis. At least some of these notions, like inception or inchoativeness and the related notion of change of

state, are relevant to the prominent features of the COS *le* (cf. Christensen 1994).¹⁴

Secondly, from the etymological point of view, the aspect marker *-le* developed from the sentential *le*. These morphemes are closely related. In fact, the presence or absence of the COS *le* may have a direct bearing upon the aspectual meaning of a sentence. Consider the following example:

- (4) *yiwan duo dun gezha, yi zai Guangzhou*
 ten-thousand more ton chrome-dreg, already on Guangzhou
dong jiao de [...] shanpo shang duifang-le 16-nian
 east suburb GEN hill on heap-up-ACTL 16-year
le
 COS

“More than 10 thousand tons of chrome dregs have been heaped up on the hillside in the eastern suburbs of Guangzhou for 16 years”

This sentence means that these dregs were still on the hillside with reference to the speech time (because no particular RT is specified, cf. section 4.1.4). But if the COS *le* is removed, it would mean that they were no longer there. Similar patterns are not uncommon in daily communication. Consider the following pair cited from Dai (1997:21):

- (5) a. *zhe-ben shu wo kan-le san-tian*
 this-CLF book I read-ACTL three-day
 “I read the book in three days (I finished reading it)”
 b. *zhe-ben shu wo kan-le san-tian le*
 this-CLF book I read-ACTL three-day COS
 “I have read this book for three days (I haven’t finished reading it)”

Clearly (5a) and (5b) have different aspectual meanings. While the former indicates the completion of the reading event, the latter gives no such indication. The only syntactical difference here is that (5b) has the COS *le* while (5a) does not. It is the absence or presence of the COS *le* that has contributed to their different aspectual meanings.

Thirdly, as the two morphemes are written and pronounced identically, several problems arise. Without proper context, it is sometimes difficult to determine which *LE* is used in a given utterance. There are also occasions where *LE* occurs in the post-verbal and post-sentential position simultaneously and plays the role of both (see Table 4.1). An analysis of aspect in Chinese would obviously be incomplete without inclusion of the COS *le*.

In conclusion, not only should the COS *le* be differentiated from the actual *-le*, it should also be included in an account of aspect in Chinese (see section 4.1.7). As the first step to modelling viewpoint aspect in Chinese, this section proposed a two-morpheme approach to *LE* that defined the aspect marker for the actual viewpoint and the COS marker in Chinese. In the section that follows, we will define the aspectual meaning of the actual viewpoint.

4.1.2 The actual *-le*: completion or termination?

Another issue which is as controversial as the one discussed in the previous section is the type of closure signalled by the actual *-le*. While it has been argued that *-le* signals completion (e.g. Wang 1965:458; Chao 1968) or termination (e.g. Smith 1997), our data shows that the closure type indicated by *-le* depends upon situation aspect, i.e. telic situations are completed whereas atelic situations are terminated when they interact with *-le*. This section reviews the relevant literature and provides corpus evidence for our observation.

Traditionally, the actual *-le* is considered to indicate the completion of the action denoted by a verb. Chao (1968:247), for example, argues that the actual *-le* has the class meaning of “completed action”. Following Chao, Henne et al. (1977:117) claim that *-le* indicates “the completed action of the verb to which it is attached.” Similar views can also be found in Zhu (1981), Lü (1981:314–321) and Tiee (1986:96).¹⁵ But the traditional view cannot account for the puzzle in (5) above: if *LE* indicates completion, then why is “a completed reading [...] derived when one *LE* is used, but [...] is not allowed when an additional *LE* is used?”¹⁶ Interestingly, all of the scholars quoted above relate completion to the action of a verb rather than a situation denoted by a sentence. Their approach is clearly incompatible with the definition of aspect adopted in this work (cf. chapter 2). In fact, the compositional nature of situation aspect is widely observed in the literature. The semantic features of many sentential constituents other than verbs contribute to the aspectual meaning of a sentence, though verbs play a central role (cf. section 3.4).

More recent studies, however, realise that the actual *-le* does not necessarily indicate completion. While the perfective with an RVC unequivocally indicates completion, “simple perfectives” (Smith 1988:218; 1997:264) – sentences with *-le* alone but without RVCs – only present events without indicating the closure type (Smith 1988:216, 218; Tai 1984:291–292; Chu 1976:48).¹⁷

This view has won widespread acceptance in the literature (e.g. Li & Thompson 1981:215–216; Zhang 1995: 115–116; Christensen 1994; Smith 1997:264–265; Dai 1997:21).

While we agree with this latter view in principle, we argue that the type of closure indicated by *-le* is not as arbitrary as Smith (1988:228) claims: “Semantically, sentences without completive RVCs do not present a completed event; but pragmatically, they often do just that.” Such arbitrariness has led to much confusion in Smith’s own work. Let us consider some of her examples:

- (6) a. *wo zuotian xie-le yi-feng xin* (*ibid*:218)
 I yesterday write-ACTL one-CLF letter
 “I wrote a letter yesterday”
- b. **wo zuotian xie-le yi-feng xin, keshi mei xie-wan*
 *I yesterday write-ACTL one-CLF letter, but not
 write-finish
 *“I wrote a letter yesterday, but didn’t finish”
- c. *wo zuotian xie-wan-le yi-feng xin* (*ibid*:219)
 I yesterday write-finish-ACTL one-CLF letter
 “I finished writing a letter yesterday”
- (7) *qunian shi-yue, Yang Bingming xie-le*
 last-year October, Yang Bingming write-ACTL
*liang-feng xin, *keshi mei xie-wan*
 two-CLF letter, *but not write-finish
 “Last October Yang Bingming wrote two letters, *but didn’t finish them”

Smith (1988:218) asserts that sentences like (6a) “present events as terminated but not necessarily completed”, but in Smith (1997:265) she contradicts her own assertion by arguing that the most natural interpretation of (6a) would be that the letter was finished. In order to resolve this contradiction she immediately adds the caveat that “the completive interpretation is conversational only: it can be cancelled by other information”, as shown in (6b). However, (6b) in fact sounds unacceptable to a native speaker (cf. also Teng 1986), because the letter-writing event in (6b) only allows a completive reading and cannot be contradicted by the conjoined second clause. It is clear, therefore, that whether *-le* co-occurs with the RVC *-wan* (as in 6c) or not (as in 6a and 6b), *-le* indicates the completion of the letter writing event in all of these examples. This point is shown more clearly when the direct object is quanti-

fied, as in (7), because the [+count] NP interacting with an accomplishment verb definitely results in a telic situation (cf. section 3.4.2).

It is true that simple perfectives may indicate either completion or termination, but the type of closure depends on the type of situation. That is, telic situations are presented as completed whereas atelic situations are presented as terminated.¹⁸ Our explanation for this is that when a telic situation is presented perfectly as a single unanalyzable whole, its inherent final spatial endpoint is naturally included, thus resulting in a completive reading. On the other hand, an atelic situation does not have an inherent final spatial endpoint, so when it is presented perfectly, only an arbitrary final temporal endpoint is included. Thus a terminated reading is appropriate.¹⁹ Example (6b) cited above will become acceptable if the quantified direct object is replaced by a bare noun, as shown in (8):

- (8) *wo zuotian xie-le xin, keshi mei xie-wan*
 I yesterday xie-ACTL letter, but not write-finish
 “I did some letter writing yesterday, but I didn’t finish”

The acceptability of (8) can be explained as follows. In this sentence, the object *xin* “letter(s)” is a bare noun, which is at best ambiguous between [+count] and [–count] (cf. section 3.4.2).²⁰ When the bare noun interacts with the accomplishment verb *xie* “to write”, the resulting situation can naturally be taken as an activity (i.e. letter-writing). Thus the situation conveyed by the first clause in (8) has a terminated reading and further assertion can be made that the letters were not finished.

The above analysis suggests that the type of closure indicated by the actual *-le* is related to situation type. Smith (1988:218) also realises this relationship when she claims that “the choice between termination and completion arises only with telic events, of course. Atelic events have no other possibility besides termination.”²¹ While agreeing with the second part of her claim, we argue that no choice is open to telic situations either. That is, for a telic situation, only a completive reading is possible. Let us examine the three examples Smith uses to support her claim (Smith 1988:220):²²

- (9) a. *Zhangsan xue-le Fawen, keshi mei xue-hui*
 Zhangsan study-ACTL French, but not learn
 “Zhangsan studied French, but he still didn’t know it”

- b. **wo mai-le san-ben shu, keshi mei mai-dao*
 *I buy-ACTL three-CLF book, but not buy-succeed
 *‘‘I bought three books, but I didn’t succeed in buying them’’
- c. *Zhangsan zhao-le ta de shoubiao, keshi mei*
 Zhangsan look-for-ACTL he GEN watch, but not
zhao-dao
 find
 ‘‘Zhangsan looked for his watch, but he didn’t find it’’

The first point to be noted here is that Smith asserts that the completive readings in (9a-c) are cancelled by conjuncts (cf. Smith 1988:288). A closer inspection, however, reveals that *xue Fawen* ‘‘study French’’ and *zhao ta de shoubiao* ‘‘look for his watch’’ are both atelic events, because only *xue-hui Fawen* ‘‘to learn French’’ and *zhao-dao ta de shoubiao* ‘‘to find his watch’’ are telic (cf. Smith 1988:220, 234, 1997:283; Tai 1984:290). If in (9a) and (9c) *-le* did signal a completive reading which was cancelled by the conjoined second clauses, Smith would be contradicting her own claim, quoted above, that only termination is possible for atelic situations. Secondly, while Smith is right in saying that the first clauses in (9a) and (9c) do not have completive readings, she is wrong in the case of (9b). For the same reason as discussed in the analysis for (6) above, *mai san-ben shu* ‘‘buy three books’’ in (9b) is a telic event, and its completive reading cannot be cancelled. The example does not serve her purpose. Smith is on the right track when she realises that ‘‘because telic events involve completion, they may be used to implicate completion’’ (Smith 1988:228). But regrettably, she attributes the final decisive role of the closure type to pragmatics.

Tai (1984) also observes that Vendler’s examples of accomplishments such as *paint a picture* and *write a letter* may or may not imply the attainment of a goal in Chinese (Tai 1984:291). Tai’s observation is accurate, but the explanation he provides for this – ‘‘depending on the particular context which a native speaker happens to be in’’ – is not. We would argue that the closure types of these situations depend on how these expressions are translated. If we translate *paint a picture* as *huahua* and *write a letter* as *xiexin*, then they are atelic, and when they are presented perfectly with the actual *-le*, only terminated readings are possible. But if we translate *paint a picture* as *hua yi-fu hua* and *write a letter* as *xie yi-feng xin*, then they are telic situations which only allow completive readings when presented perfectly.²³

Tai (1984) argues that ‘‘for many native speakers’’, sentences like (6a) may

imply the attainment of a goal, but sentences like (6b) “suffice to show the implication is not absolute” (Tai 1984:291). Tai’s argument is even less convincing than Smith’s claim that “the completive interpretation is conversational only” (Smith 1997:265). One problem with Tai’s argument is its unreliable theoretical basis. “For many native speakers” is a rather vague concept: How many? What percentage? Unfortunately Tai has no evidence to support this vague quantification. Another problem with his argument is the acceptability of his counter-examples (sentences like 6b). If Tai had followed the convention of treating Chinese as a *non-article* language and had not translated these two expressions so literally, he might have come to the same conclusion as presented here: the interaction of telic situations with the actual *-le* brings about completive readings while the interaction of atelic situations with *-le* brings about terminative readings.

Our claim that the closure types are related to situation types does not differ much from Smith (1988:218),²⁴ because she also agrees that atelic events can only be interpreted as terminated.²⁵ We differ in our treatments of telic events, however. Smith’s accomplishments are of two types, one is the simple form like *xie yi-feng xin* “to write a letter”, and the other is the RVC form like *xie-wan yi-feng xin* “to write-finish a letter”. Her second type of accomplishment falls within the category of achievement in our model (see sections 3.3.2 and 3.5). As an achievement encodes a result itself and is punctual in nature, it is expected that once such a situation is actualised, it is completed. This prediction is supported by empirical evidence. Of the 509 achievements taking *-le* found in the Weekly training corpus and 59 instances in the test corpus, all have completive readings without exception. Here are some examples:

- (10) a. *na jiahuo shao-cheng-le hui, wo ye neng*
 that guy burn-become-CTL ash, I still can
ren-chulai
 recognise
 “Even if that guy was burnt into ashes, I would recognise him”
- b. *zhidao yu-shang-le gaoshou*
 know encounter-CTL master-hand
 “(He) knew that he had encountered a master-hand”

The difference between Smith’s argument and ours revolves around the closure type of accomplishments (her simple form accomplishments) when they are presented with the actual viewpoint. Our argument is that accom-

plishments can only be interpreted as completed, whereas Smith assumes that this type of situation may have a choice between termination and completion. Smith's assumption, however, is baseless, as the counter-examples she uses for the contradiction test, e.g. (6b) and (9b), are unacceptable. Smith's assumption also lacks empirical evidence. Even if her intuition is correct, her concocted examples are atypical of attested language use. In our corpus, all of the 337 accomplishments taking *-le* can only allow completive readings. Consider the corpus example in (11):

- (11) *wo jimang yi gaojia zu-le yi-liang Beijing jipuche,*
 I hurry with high-price hire-ACTL one-CLF Beijing jeep,
zhishi Wangzhuang
 direct-rush Wangzhuang
 "I hurriedly hired a 'Beijing' jeep at a high price, and headed direct for Wangzhuang"

The situation *I hired a Beijing jeep* is an accomplishment presented with the actual viewpoint. Even if a conjoined second clause could cancel its completive reading, the conjunct would clash with some other sentential element, i.e. "at a high price", as in **wo jimang yi gaojia zu-le yi-liang Beijing jipuche, keshi mei zu-dao* "I hurriedly hired a Beijing jeep at a high price, but didn't succeed in hiring it". We normally assume that when the price is settled, the deal is concluded. Furthermore, if the completive reading of the actualised accomplishment could be cancelled, the subsequent event *headed for Wangzhuang* is difficult to understand. Therefore, our argument for the positive relation between the telicity value of a situation and its closure type is supported by both theoretical analysis and empirical evidence.

Having defined the aspect marker for the actual viewpoint and its aspectual meaning, it is now appropriate to move on and discuss the interaction between the actual viewpoint and situation aspect in the section that follows.

4.1.3 The interaction between *-le* and situation types

Many attempts have been made in the literature to account for the interaction between the actual viewpoint and situation types. However, as we will see in this section, none of the generalisations proposed is satisfactory, because the intuition-based approach taken by these studies cannot provide a basis for quantification (cf. section 1.3). In this section, we will review four claims

found in the literature, namely those made by Li (1999), Pan (1993, 1998), Smith (1997) and Yang (1995). On the basis of this review, we will provide corpus evidence for our account of this interaction, i.e. *-le* shows a strong preference for telic and bounded situations.

Both Smith (1997:70, 264) and Pan (1993) assert that the actual *-le* only applies to non-stative situations. Smith's (1997:69) explanation for the incompatibility of *-le* with states is that perfectives prototypically include the endpoints of a situation, which states lack. However, this explanation is insufficient, as a stative situation can actually have a final temporal endpoint and be presented perfectly in its totality as well (cf. section 3.4.3).²⁶ Pan (1998) is aware of the distinction between stage-level and individual-level predicates and corrects this generalisation to claim that "perfective marker *-le* can be used only with stage-level predicates which include some of the statives." "Some of the statives" here refer to SLSs like *ta bing-le san-tian* "He was ill for three days" (see section 3.3.3). Smith and Pan seem to suggest that the actual viewpoint marked by *-le* is sensitive to the feature of [\pm dynamic].

However, this generalisation is not supported by our data (see Table 4.2). If the actual viewpoint is not available to stative situations (ILSs or SLSs) as Smith and Pan assert, the following examples should be ill-formed, but they are quite natural and acceptable:

- (12) a. *Yindu he Bajisitan ye you-le he nengli*
 India and Pakistan also have-CTL nuclear capacity
 "India and Pakistan also had nuclear capacities"
- b. *shouhairen chenmo-le pianke hou shuodao [...]*
 victim silent-CTL a-moment after say
 "After a moment of silence, the victim said..."

(12a) is an ILS and (12b) is an SLS. But they both take the actual *-le* felicitously. In fact, of the 1,019 actualised situations found in the Weekly training corpus, 29 are ILSs and 20 are SLSs, with the two types combined accounting for nearly 5% of the total of actualised situations. A similar distribution pattern is found in the test corpus, where ILSs and SLSs combined account for 6.7% of the total number of actualised situations. The frequency of actualised states in our data is relatively low when compared with those of achievements, accomplishments and activities (their low frequency will be explained later in this section), but it is significant enough to invalidate Smith's generalisation.

On the other hand, Li (1999) argues that the actual *-le* only appears in telic

situations like accomplishments and achievements,²⁷ but not in atelic situations like states and activities.²⁸ In fact, our data shows that it is not uncommon for atelic situations (around one fifth of the total) to take *-le*. As noted above, both SLSs and ILSs can be presented with the actual viewpoint. It is also not hard to find activities taking the actual *-le*, e.g.:

- (13) a. *shenxun yijing chixu-le jiangjin*
interrogation already continue-ACTL nearly
yi-ge shangwu
one-CLF morning
“The interrogation has gone on for nearly the whole morning”
- b. *da-le ni ji-tian?*
beat-ACTL you how-many-day
“For how many days did they beat you?”

In these sentences, *chixu* “continue, last” is an activity while *da* “to beat” is a semelfactive. Neither of them has a natural final spatial endpoint, but they can both be presented with the actual viewpoint. There are 127 actualised activities in the training corpus, accounting for more than 10% of the total number of situations taking *-le*. An even higher proportion (22 out of 119, i.e. 18.49%) is found in the test corpus. This is the empirical evidence which allows one to refute Li’s (1999) assumption that *-le* is limited to telic situations.

Yang (1995) is aware of the different natures of final spatial and temporal endpoints. She argues that all situations with a final spatial endpoint (i.e. telic situations) can be presented with the actual viewpoint. In addition, atelic situations (including states), when they are bounded temporally by delimiting mechanisms (cf. section 3.4.3), can also take *-le*, as shown in the (b) examples below. But without such delimiting devices providing a temporal boundary, atelic situations cannot felicitously co-occur with *-le*, thus all of the (a) examples below are unacceptable. Here are her examples (Yang 1995: 115):

- (14) a. **Liming ai-le Xiaojuan*
*Liming love-ACTL Xiaojuan
“Liming loved Xiaojuan”
- b. *Liming ai-le Xiaojuan san-nian*
Liming love-ACTL Xiaojuan three-year
“Liming loved Xiaojuan for 3 years”
(State bounded by a *for*-adverbial)

- (15) a. **Lisi tui-le che*
 *Lisi push-ACTL cart
 “Lisi pushed the cart”
 b. *Lisi tui-le tui che*
 Lisi push-ACTL push cart
 “Lisi pushed the cart a bit”
 (Activity bounded by verb reduplication)
- (16) a. **Lisi kesou-le*
 *Lisi cough-ACTL
 “Lisi coughed”
 b. *Lisi kesou-le yi-sheng*
 Lisi cough-ACTL one-CLF
 “Lisi coughed once”
 (Semelfactive bounded by a verbal classifier phrase)

Yang’s observation appears to be closer to the fact, but her assertion that no [–bounded] situation can take *-le* is challenged by our corpus data as it does not show any such clear-cut distinction. While most examples fit Yang’s claim, there are also felicitous examples which do not fit her claim. For example:

- (17) a. *ruguo you-le neng dadong wo de juben,*
 if have-ACTL can move I GENscript,
wo bu hui fangguo (ILS)
 I not will let-go
 “If there is a script that can move me, I will not let it slip by”
 b. *ta zhongyu song-le yi-kou qi* (SLS)
 he finally loose-ACTL one-CLF air
 “He could finally feel relieved”
 c. *ta zhi laihui zou-le liang-quan,*
 he only back-and-forth walk-ACTL two-CLF
jiu xiao-le (ACT)
 then laugh-ACTL
 “He laughed only after he walked back and forth twice”
 d. *Chen chengren ziji paida-le xiaohai* (SEM)
 Chen admit self pat-ACTL child
 “Chen admitted that she had patted the boy”

As noted in sections 3.3 and 3.5, ILSs, SLSs and activities are inherently [–bounded] while semelfactives can be either [+bounded] or [–bounded]. Yet

all of the examples in (17) are perfectly felicitous even when they are not delimited externally. So while the claims of Smith (1997) and Li (1999) seem ill-grounded, Yang's (1995) claim that the actual *-le* is sensitive to a temporal boundary is supported somewhat by the corpus data. Yet Yang's claim needs modification: the actual viewpoint is sensitive, *to some extent*, to the feature [\pm bounded].

The two types of states and activities are inherently [$-$ bounded] and [$-$ telic] while accomplishments and achievements are intrinsically [$+$ bounded] and [$+$ telic]. Semelfactives are [$-$ telic] but shift readily between [$+$ bounded] and [$-$ bounded]. Therefore, the actual *-le* is expected to co-occur more easily with accomplishments and achievements. This prediction is in fact borne out by our corpus data. A breakdown of the actualised situations across situation types in the corpus is given in Table 4.2.

Table 4.2. Breakdown of actualised situations across situation types

Situation type	Frequency/ percentage	[\pm bounded]		Total
		[$+$ bounded]	[$-$ bounded]	
ILS	Frequency	1	35	36
	Percentage	0.1%	3.1%	3.2%
SLS	Frequency	2	19	21
	Percentage	0.2%	1.7%	1.8%
ACT	Frequency	93	56	149
	Percentage	8.2%	4.9%	13.1%
SEM	Frequency	16	11	27
	Percentage	1.4%	1.0%	2.4%
ACC	Frequency	337	0	337
	Percentage	29.6%	0%	29.6%
ACH	Frequency	568	0	568
	Percentage	49.9%	0%	49.9%
Total	Frequency	1017	121	1138
	Percentage	89.4%	10.6%	100.0%

The table shows the frequency counts of different situation types as well as their proportions within each situation type and [\pm bounded] categories. It can be seen from the table that around three quarters of the total examples represent telic situations (i.e. accomplishments and achievements). Furthermore, of the remaining atelic situations, nearly half (accounting for 9.75% of the total of actualised situations) involve a temporal boundary provided by some delimiting device. When these [$+$ bounded] situations and [$+$ telic] situa-

tions, which are necessarily [+bounded], are taken together, they account for 89.4% of the actualised situations in our data. The log likelihood (LL) score calculated for the difference in the distribution of *-le* in [+bounded] and [-bounded] situations is 514.9, much greater than the critical value of 20.52 (5 degrees of freedom) for the significance level $p < 0.001$. This means the difference in counts of [+bounded] and [-bounded] situations taking *-le* is statistically significant and indicates a strong *tendency* for *-le* to occur with situations including a spatial or temporal endpoint.²⁹

It is also interesting to note from the table that the [+bounded]/[-bounded] ratios for activities, semelfactives, SLSs and ILSs are 1.661 (i.e. 93/56), 1.445 (i.e. 16/11), 0.105 (i.e. 2/19) and 0.054 (i.e. 1/35) respectively. Hence, as far as situation types are concerned, activities and semelfactives are more likely to be bounded externally than ILSs and SLSs. Semelfactives show a slightly lower ratio than activities because semelfactives *can* be intrinsically bounded, i.e. they do not require an external delimiting mechanism. SLSs demonstrate a higher [+bounded]/[-bounded] ratio than ILSs because the former characterise more temporary stages of an individual and are thus more likely to have a temporal boundary.

Before we go on to examine the interaction between *-le* and situation aspect, it is appropriate to address the alleged “redundancy” of *-le* (i.e. problem C, see section 2.1). Klein et al. (2000: 732) argue that *-le* is redundant if its function is defined “as indicating that a situation is being viewed in its entirety or as a whole, in other words, bounded”: “why should it be added to a sentence if the boundedness of a situation is already indicated in one way or another?” This argument, however, is untenable.

First, the argument is based on the condition that the function of *-le* is defined as indicating the boundary of a situation, which is not necessarily true. As noted earlier in this section and also in section 3.4.3, unlike the English simple aspect, which provides a final spatial endpoint to a telic situation (i.e. completive reading) and a final temporal endpoint to an atelic situation (i.e. terminative reading) in addition to presenting a situation in its entirety, *-le* only presents a situation as a whole but does not provide any final endpoint. The marker occurs more frequently with a telic or bounded situation simply because such a situation has a final spatial or temporal endpoint. The function of *-le* is to mark the actuality (see section 4.1.4) rather than indicate the boundary of a situation.

Second, presenting a situation in its entirety or as a whole is not identical to

indicating its boundary. A boundary, either spatial or temporal, of a situation is intrinsic to situation aspect (cf. sections 3.2.3 and 3.2.5) whereas the perspective from which a situation is presented is independent of situation aspect and subject to speaker choice (cf. section 2.4). Klein et al. are clearly conflating the two components of aspect in their argument.

Third, while a situation may have a final spatial or temporal endpoint, whether this endpoint is or is not presented depends on the viewpoint aspect a speaker chooses. In *we're making a movie*, for example, the situation *make a movie* is [+telic] and has a final spatial endpoint. When the movie is made, the final endpoint is reached. Nevertheless, as the speaker chooses the progressive aspect to present this telic situation, the final endpoint of the situation is no longer visible. It is the interaction between situation aspect and viewpoint aspect that determines the aspectual meaning of a sentence. By the same token, *-le* as a perfective marker presents a situation in its entirety irrespective of the final endpoint of the situation.

The above analysis shows that the claim that *-le* is redundant is ill-founded. The misleading claim made by Klein et al. is a direct result, in our view, of their intuition-based approach, as reflected by their use of infelicitous invented examples. As noted in sections 1.3 and 3.4.2, intuition is not always reliable. Ironically, while Klein et al. criticise Smith (1991) for her “empirical problems” (*ibid*:739), we cannot find any empirical data in their approach to aspect. The problem with Klein et al.’s examples is not simply limited to the discussion of *-le*. For example, the authors argue that (18a) is semantically equivalent to (18b). This claim, however, is deeply flawed as while (18b) is a complete sentence, (18a) is incomplete. As it stands, (18a) is as unacceptable as (19a). While we agree with Klein et al. that “out of context” (*ibid*:732), most sentences without an aspect marker would sound somewhat odd, in an appropriate context (19a) is as felicitous as (18a), as shown in the rewritten sentences in (18c) and (19c). We must also note that examples like (19b) are not uncommon in our corpus data.

- (18) a. **Zhangsan xie-wan zhe-feng xin* (*ibid*:732)
 Zhangsan write-finish this-CLF letter
 b. *Zhangsan xie-wan-le zhe-feng xin* (*ibid*)
 Zhangsan write-finish-CTL this-CLF letter
 “Zhangsan finished writing the letter”

- c. *Zhangsan xie-wan zhe-feng xin hou...*
 Zhangsan write-finish this-CLF letter after
 “After Zhangsan finished writing the letter...”
- (19) a. **Zhangsan si* (ibid)
 Zhangsan die
- b. *Yang Xianqing si hou, ge shao jiejie he*
 Yang Xianqing die after, brother sister-in-law sister and
jiefu dou you yi-zhong jietuogan
 brother-in-law all have one-CLF relief
 “After Yang Xianqing died, his brother, sister-in-law, sister and
 brother-in-law all felt a great relief”
- c. *Zhangsan si hou...*
 Zhangsan die after
 “After Zhangsan died...”

Have addressed the alleged “redundancy” of *-le*, we will discuss, in the remainder of this section, the interaction of the actual viewpoint with individual situation types. It should be noted that for this purpose, we are speaking of situation types at the core level, because viewpoint aspect may coerce a situation type shift at the clause level to make the situation type compatible with a certain viewpoint (see section 3.4.2).

States may hold for an indefinite interval and are therefore intrinsically open-ended. This feature explains their relatively low frequency of co-occurrence with the actual *-le*, which is more likely to appear in bounded situations. ILS verbs characterise the more permanent dispositions of an individual (cf. section 3.3.3). Because *-le* only functions to present a situation in its entirety rather than provide any endpoint, the mere addition of *-le* to an ILS *normally* does not result in a grammatical sentence (e.g. 14a) unless a temporal boundary is explicitly provided by an external delimiting device (e.g. 14b). But this requirement is not absolute. The following are some counter examples to demonstrate this, in which ILS verbs are highlighted.

- (20) a. *quanwei-jiguan yi you-le mingque*
 authorities already have-ACTL definite
de jielun
 GEN conclusion
 “The authorities have got a definite conclusion”

- b. *Yang Xianqing jiu jubei-le zhe-lei renwu*
 Yang Xianqing already possess-ACTL this-CLF person
de quanbu tezheng
 GEN all characteristic
 “Yang Xianqing bears all of the characteristics of a dangerous person”

In both sentences, the ILSs are not bounded. The actual *-le* indicates that these situations are presented as a unified whole. However, it should be noted that *-le* in these sentences can be omitted without a significant change in meaning. This shows that ILSs behave quite differently from other situation types with respect to aspect marking: while the latter have to be marked aspectually, either overtly or covertly, to have a specific closed reading, the former do not have this requirement (cf. also Yang 1995:108; Moens 1987). In this respect, SLSs are more “event-like” (Carlson 1977) because they also have to be marked aspectually. Compare the acceptability of the following attested example (21a) and its modification (21b):

- (21) a. *yi-ge laotaiipo chulai, jian shi ji-ge*
 one-CLF old-woman come-out, see are a-few-CLF
jingcha, dunshi huang-le shen
 policeman, immediately panic-ACTL expression
 “An old woman came out. She was scared out of her wits when she found that the visitors were some policemen”
- b. **yi-ge laotaiipo chulai, jian shi ji-ge*
 *one-CLF old-woman come-out, see are a-few-CLF
jingcha, dunshi huangshen
 policeman, immediately look-flustered

Because of the dynamic nature of the actual viewpoint (see section 4.1.6), [–bounded] stative situations (both ILSs and SLSs) taking the actual *-le* often involve an inceptive point at which a new state starts holding. In other words, the actual *-le* demonstrates *ingressive dynamicity* with [–bounded] states and may change situation type from unbounded states to derived activities at the clause level (cf. Comrie 1976:19–20). This accounts for why some stative situations have inchoative readings while others do not. Consider the following examples:

- (22) a. *ta pang-le* (Klein et al. 2000:755)
 she/he fat-DBL
 “She/he became fat”

- b. *ta pang-le henduo*
she/he fat-ACTL much
“She/he is much fatter”
- (23) a. *Zhangsan bing-le*
Zhangsan ill-DBL
“Zhangsan got ill”
- b. *Zhangsan bing-le liang-tian* (*ibid*:756)
Zhangsan ill-ACTL two-day
“Zhangsan was ill for two days”
- (24) a. *Zhangsan xiao-le, erqie xiao-de*
Zhangsan laugh-ACTL and laugh-PRT
hen kaixin (*ibid*:756)
very happy
“Zhangsan laughed, and he laughed very happily”
- b. *Zhangsan xiao-le-qilai, erqie xiao-de*
Zhangsan laugh-ACTL-INC, and laugh-PRT
*hen kaixin*³⁰
very happy
“Zhangsan started to laugh, and he laughed very happily”

As (22a) and (23a) are [–bounded] states, both of them allow inchoative readings. Klein et al. (*ibid*:756) correctly observe that “quantification after the verb can release the inchoative meaning and give the sentence a normal perfective reading.” As will be discussed below, quantification actually delimits a situation by affixating a temporal boundary to the situation at the clause level (cf. section 3.4.2). As such, neither (22b) nor (23b) allows an inchoative reading. Klein et al. (*ibid*) argue that “inchoative readings can also arise” even when a typical activity verb like *xiao* “laugh” takes *-le*, as in (24a). This argument, nevertheless, simply does not hold, as in (24a), only a normal actualisation reading applies. To denote an inceptive reading of an activity, the inceptive *-qilai* is more appropriate, as in the modified example (24b).

In the Weekly corpus, with the exception of two instances of [+bounded] SLSs and one [+bounded] ILS, all of the remaining 54 unbounded stative situations (ILSs and SLSs taken together) allow ingressive readings. Wang (1999:112–114) even argues that the actual *-le* “is not always a perfective marker” and its other possible interpretation “seems to be comparable to that of sentential *le*, namely denoting a new situation.” But it should be

stressed that *-le* indicates an ingressive reading only with a [–bounded] state, [+bounded] states and all other situation types do not have such a reading whereas the sentential (COS) *le* indicates a change of state regardless of situation types (cf. section 4.1.7).

Activities are intrinsically neither telic nor bounded. Because the actual viewpoint is sensitive to a final endpoint, it can be predicted that activities taking *-le* are more likely to be temporally bounded. This prediction is supported by corpus evidence. Of the 149 actualised activities found in the Weekly corpus, 93 have a temporal endpoint provided by some delimiting mechanism, accounting for around 62% of the total. This evidence also weighs against the claim made in the literature (e.g. Yang 1995:116; Li 1999:216) that atelic or unbounded situations can *never* take *-le*. Rather, our data shows that the compatibility of *-le* with atelic and unbounded situations is a matter of degree. Consider the following examples:

- (25) a. *ta pai-le wushu-ge huaqian-yuexia*
 he act-CTL countless-CLF romantic
de baima-wangzi
 GEN white-knight
 “He has acted countless romantic white knights”
- b. *yi-ge xiao nühai [...] beishang de ku-le-qilai*
 one-CLF little girl sad PRT cry-CTL-INC
 “A little girl began to cry sadly”

The situations described in (25) are both unbounded activities, but it is not hard to find them to take the actual *-le* in our corpus data. The verb *pai* “to play the part, act” in (25a) is an accomplishment, but its interaction with a [–count] object NP (modified by *wushu-ge* “countless”) results in an atelic situation; *ku* “to cry” in (25b) is also an activity with no final endpoint. In both cases, the actual viewpoint simply focuses on the actualisation of these events and gathers them in their entirety. In comparison, bounded activities take the actual *-le* more easily. Our corpus data registers a ratio of 1.66:1 between bounded and unbounded activities taking *-le*. As activities are inherently unbounded, their final temporal endpoint is normally provided by an extra delimiting mechanism. Consider the following examples:

- (26) a. *xingxun yanxu-le san-ge xiaoshi*
 torture-inquisition continue-CTL three-CLF hour
 “The inquisition by torture lasted as long as three hours”

- b. *na hanzi zuoyou xunshi-le yi-fan,*
 that man left-right look-around-ACTL one-CLF,
disheng dao [...]
 low-voice say
 “The man cast his eyes around, and said in a low voice [...]”
- c. *wo huitou wang-le wang zhe-ge*
 I turn-around look-ACTL look this-CLF
popo-lanlan de jia
 run-down GEN home
 “I turned around and took a brief look at this run-down home”

The activities denoted in these sentences are bounded respectively by a *for*-adverbial (26a), a verbal classifier phrase (26b) and verb reduplication (26c). It is clear that the aspect marker *-le* does not provide any final endpoint, rather it simply indicates the occurrence or actualisation of a situation.

Because the inherent temporal boundary of semelfactives can easily be overridden when they shift from single-event to multiple-event readings, semelfactives group with activities. But they differ from activities in that they *can* have the feature of [+bounded] even without an extra delimiting mechanism. As such, it can be predicted that semelfactives can take *-le* more freely than activities. This prediction is also supported by the corpus data. Of the 27 occurrences of semelfactives taking *-le* in the Weekly training corpus (no instance of actualised semelfactive was found in the test corpus), 16 are bounded by extra delimiting mechanisms, with a ratio of 1.45:1, lower than the ratio for activities 1.66:1. Our observations of the behaviour of semelfactives also weigh against Yang (1995:118), who assumes that “delimiting mechanisms *have to be employed* to provide specific closed readings out of semelfactives.” Here is an example of the felicitous use of a semelfactive without an extra delimiting device:

- (27) *Fu Yiwei de xiaoguzi da-le Chen Hua*
 Fu Yiwei GEN sister-in-law beat-ACTL Chen Hua
 “Fu Yiwei’s sister-in-law beat Chen Hua”

When a semelfactive needs to be bounded, the same three delimiting devices also apply, as shown in the following examples:

- (28) a. *da-le ni ji-tian?* (for-adverbial)
 beat-ACTL you how-many-day
 “For how many days did they beat you?”

- b. *Yang Xianqing zhui-shang-le ta, ju dao*
 Yang Xianqing catch-up-ACTL he, hold knife
lian chi-le liu-xia (Verbal classifier phrase)
 continuously stab-ACTL six-CLF
 “Yang Xianqing caught up with him and stabbed him six times with his knife”
- c. *laoren xiao-zhe dou-le*
 old-man smile-DUR shake-ACTL
dou shou (Verb reduplication)
 shake hand
 “The old man shook his hand with a smile”

While the interaction of the actual viewpoint with all other situation types is an issue that has aroused much controversy, there is a unanimous agreement that accomplishments and achievements can take *-le* felicitously (e.g. Smith 1997; Pan 1998; Yang 1995; Li 1999). As noted in sections 3.3.2 and 3.5, accomplishments and achievements are both telic situations, i.e. they have both a final spatial endpoint and a temporal boundary even without an extra delimiting mechanism. As such, these two situation types interact with the actual *-le* naturally. Accomplishments and achievements combined account for more than 80% of the total counts of actualised situations found in the Weekly corpus (see Table 4.2). This provides empirical evidence to support our assumption that the actual *-le* is sensitive to endpoint, but that the sensitivity is merely a matter of degree. In the following examples, situations in (29) are accomplishments and those in (30) are achievements.

- (29) a. *women you kaifa-le yixilie xin chanpin*
 we again develop-ACTL a-series new product
 “Then we developed a series of new products”
- b. *qunian shi-yue, Yang Bingming xie-le*
 last-year October, Yang Bingming write-ACTL
liang-feng xin
 two-CLF letter
 “Last October, Yang Bingming wrote two letters”
- (30) a. *di'er tian shangwu shi-dian jiu*
 second day morning 10-o'clock already
dida-le mudidi
 arrive-ACTL destination
 “They arrived at their destination at 10 o'clock the next morning”

- b. *wo haishi kan-chu-le pozhan*
 I still spot-ACTL weakness
 “But I still spotted his weakness”

Note that although accomplishments and achievements have final spatial and temporal endpoints, these endpoints are encoded in basic or derived verbs themselves (i.e. achievements) or provided by their arguments or adjuncts (i.e. accomplishments). In other words, *-le* interacting with these two situation types presents them as an unanalyzable whole. As with all other situation types, *-le* does not provide any final endpoint.

The discussion in this section shows that (1) the actual viewpoint interacts with all situation types in Chinese; (2) there is a strong tendency for *-le* to co-occur with spatially or temporally bounded situations; (3) with unbounded states, *-le* demonstrates the feature of ingressive dynamicity and coerces these situations into derived activities at the clause level; and (4) as a perfective marker, *-le* only indicates the actualisation and focuses on the totality of a situation but does not provide any final endpoint. As such, *-le* is characterised with the aspectual features of *actuality*, *holisticity* and *dynamicity*, which will be discussed in the sections that follow.

4.1.4 The actuality of *-le*

Although the closure type indicated by the actual *-le* is clear-cut as noted above (section 4.1.2), it is not essential for the discussion of perfectivity. In this book, we will introduce the concept of *actualisation* to better accommodate this feature of viewpoint aspect in Chinese. Actuality simply means that the situation denoted by a sentence actually occurs or materialises, i.e. the situation becomes a reality with respect to the relevant reference time. Actuality does not mean completiveness, it simply presupposes the realisation or actualisation of a situation.³¹

However, we are not introducing the new concept in this book to escape the criticism of Klein et al. (2000:733–735), i.e. problem D (“Realisation of the situation” and *-le*) as noted in section 2.1. Before we go on to discuss the actuality of *-le*, it is necessary to examine this criticism in more details. Klein et al. (*ibid*) argue that as “inherently bounded verbs” like *si* “die” and *wang* “forget” can describe “a so-called unreal mood when combined with modal verbs”, as in (31), “the crucial point is not whether the event is viewed in its entirety, but whether the event is ‘presented as real.’” (*ibid*:733). They use the

example in (32a) to suggest that *-le* “seems to convey a modal, rather than an aspectual meaning” (*ibid*). Klein et al. further argue that *-le* affects the ‘assertion status’ of an utterance: the addition of *-le* “somewhat indicates that the situation, or part of the situation, is, was, or will be ‘real’” (*ibid*:734) (as in 33) and claim that in marking what is really the case, *-le* plays “a crucial role: it indicates that the action and/or the goal are actually achieved” (*ibid*:734).

(31) *ta yao si le* (*ibid*:733)

he will die COS

“He is dying soon”

(32) *wo lai LE* (*ibid*)

a. I come COS

“I am coming”

b. I come-ACTL

“I came”

c. I come DBL

“I have come (i.e. I am here)”

(33) *wo xie-le xin, keshi mei xie-wan* (*ibid*:734)

I write-ACTL letter, but not write-finish

“I did some letter-writing but did not finish”

Let us now examine the above examples, which are the material basis of their arguments. In (31), we must first of all be aware of the following facts. First, inherently bounded verbs being able to occur in an irrealis mood does not entail the “crucial point” made by Klein et al. In fact, all verbs can occur in the structure of (31); and verbs like *si* “die” or *wang* “forget” are more frequently used to describe a *realis* mood. Second, as *yao* “will” in (31) indicates futurity (cf. Jin 2002:128; *inter alia*), *le* is a change-of-state (COS) *le* rather than an actual *-le* (see section 4.1.7). Similarly, *LE* in (32) is quite ambiguous between an actual *-le*, a COS *le* and a double-role *LE* (see section 4.1.1). Hence (32) has a group of meanings. We do not see why Klein et al. should single out (32a), where *LE* functions as a COS *le*, while overlooking the other meanings of the sentence. Third, we do not see why a situation should be “presented as real” rather than being viewed in its entirety when it takes *-le*. As far as we are aware, even a fictitious situation can take *-le*, as shown by Comrie’s (1976:82) well-known example: *ni si-le wo zuo heshang* “I shall become a monk when you die.” We believe that the argument of Klein et al. is a result of their attempt to “ignore some of the complications” associated with the functions of *LE*

(*ibid*:724). However, in ignoring these complications they materially misrepresent *LE* itself. Indeed, if the “crucial role” of *-le* is presenting a situation as “real” or indicating that “the action and/or goal are actually achieved” as Klein et al. claim, the authors are actually contradicting themselves as examples like (33) only serve as their counter-examples; in (33), the letter-writing event (or its goal) is clearly not achieved, as indicated by the conjoined second clause.

The above discussion shows that the “satisfactory account” (*ibid*:735) of *-le* as claimed by Klein et al. turns out to be far from satisfactory. In our analysis, *le* in (31) and (32a) functions like “a marker of ‘realis’ rather than perfective marker” (*ibid*:733) simply because it is a COS marker, which can indicate a future change of state (see section 4.1.7). The letter-writing event in (33) has a terminative reading because *xiexin* “letter-writing” in Chinese, unlike the accomplishment *write a letter* in English, is an activity (see section 4.1.2).

The above analysis, while addressing a criticism by Klein et al., has also deepened our understanding of the actuality of *-le*, which is the focus of this section. We have, so far, addressed all of the four problems Klein et al. raised, either in relation to the definition of aspect (see section 2.1) or specific to the Chinese aspect (see sections 4.1.3 and 4.1.4). Our discussion shows that these criticisms are poorly grounded. In the remainder of this section, we will discuss the actuality of *-le*.

Chinese is generally recognised as a tenseless language (cf. Comrie 1976; Smith 1988:218, 1997:263; Dai 1997:32; Gong 1991). The temporal reference in Chinese is provided syntactically by time words or semantically through the relation of situations conveyed in discourse. For example:

- (34) a. *xianzai lian women muzi de shenghuo*
 now even we mother-child GEN life
dou you-le kunnan
 even have-ACTL difficulty
 “Now I even have difficulty supporting my child and myself”
- b. *zao zai 1954 nian, Riben dui qiche jinkou*
 early in 1954 year, Japan for automobile import
guiding-le yange de pei’e
 impose-ACTL strict GEN quota
 “As early as 1954, Japan imposed strict quotas on automobile imports”

- c. *wo mingtian xia-le ban qu kan*
 I tomorrow off-ACTL work go see
dianying (Dai 1997:50)
 movie
 “I will go to see a movie after work tomorrow”

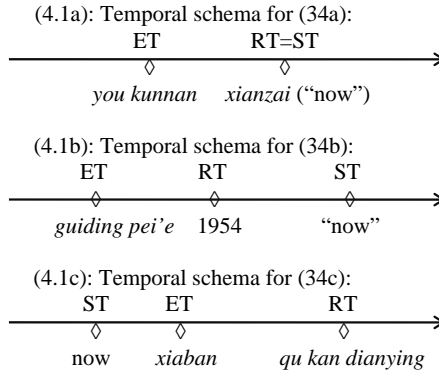


Figure 4.1. Reichenbach’s three times

Using the three times proposed by Reichenbach (1947), the temporal schemata of the above sentences can be analyzed as shown in Figure 4.1.³² According to Reichenbach (1947), sentences are oriented to speech time (ST), and may indicate a reference time (RT) that is simultaneous with or sequential to ST. When the reference time is not specified, it normally refers to the speech time “now”, and in this case RT coincides with ST. Therefore, Figure (4.1a) shows that $ET \leq RT = ST$, in Figure (4.1b), $ET \leq RT < ST$, and in Figure (4.1c), $ST < ET \leq RT$, where $<$ means *being prior to* and \leq means *being prior to or simultaneous with*. It should be noted that when a sentence conveys an actualised situation, ET must be prior to or simultaneous with RT (i.e. $ET \leq RT$). Only in this way can actuality be guaranteed. The actual *-le* cannot be used in situations where ET is posterior to RT. Therefore the following sentences are unacceptable:

- (35) a. **wo mingtian kan-le dianying*
 *I tomorrow see-ACTL movie
 *“I went to a movie tomorrow”
- b. **wo mingtian xiaban kan-le dianying*
 *I tomorrow off-work see-ACTL movie
 *“I went to a movie after work tomorrow”

Unlike tense languages focusing on event time (ET) (cf. Norman 1988:163), Chinese as a tenseless language pays more attention to relative reference time (RT). Therefore, actuality as discussed here refers to the property of a situation being actualised in relation only to the specified reference time, which can be expressed as $ET \leq RT$. Reference time may correspond to the past, the present or the future (cf. Smith 1981:214). In this section, we will discuss the actuality denoted by *-le* with respect to the three reference times.

The present reference time. When RT overlaps with ST (i.e. $RT=ET$), or when RT is unspecified, the actual *-le* signals the actuality of a situation in relation to ST “now”. Consider the following example:

- (36) *yi-ge yaoyan de nüren xiang youyongchi*
 one-CLF seductive GEN woman toward swimming-pool
zou-lai, zhi zhuan-le zhuan, bian likai-le
 walk-come, only stroll-CTL stroll, then leave-CTL
 “A seductive woman walked over to the swimming pool, but only strolled a bit and then left”

This narrative discourse conveys several actualised events with respect to the present RT, which can be illustrated diagrammatically as Figure 4.2. In the figure, the event times of these three events *zou-lai* “walk over”, *zhuan* “stroll”, and *likai* “leave” correspond to ET_1 , ET_2 and ET_3 respectively, while the reference times for these events correspond to RT_1 , RT_2 and RT_3 . In this case, event 2 “stroll” ensures the actuality of event 1 “walk over”; and likewise, event 3 “leave” guarantees the actuality of event 2. The actuality of event 3 is ensured by the speech time ST, which serves as RT_3 . Therefore, all of these are actualised events.³³ Each posterior event serves as the reference time of its preceding event,³⁴ which can be expressed as $ET_n = RT_{n-1}$, with ST serving as the reference time for the final event, i.e. $ST = RT_n$. In this way, the progressive alteration of RT and ET carries the narration forward.

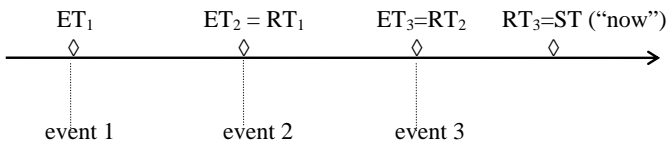


Figure 4.2. Temporal schema of actualised situations with a present RT

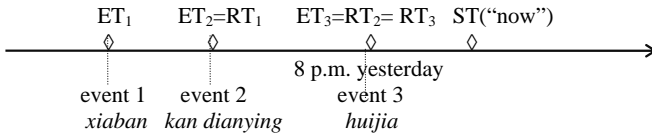
The approach proposed here is further supported by the previous finding that the perfective viewpoints (not merely the actual viewpoint, of course) normally appear in foregrounded clauses to carry the narration forward,³⁵ while imperfective viewpoints often show up in backgrounded clauses to provide background information (cf. Hopper 1979:221; Christensen 1994). Based on the above analysis, the actuality in relation to the present reference time can be expressed schematically as follows: $ET \leq RT = ST$.

The past reference time. When RT is prior to ST (i.e. $RT < ST$), the actual *-le* signals the actuality of a situation in relation to a past RT. Consider the following examples:

- (37) a. *ta zuotian xia(-le) ban qu kan-le dianying,*
 he yesterday off(-ACTL) work go see-ACTL movie
ba-dianzhong cai hui-dao-le jiali
 8-o'clock not-until return-arrive-ACTL home
 “Yesterday, he went to the cinema after work. It was already 8 when he got home”
- b. *ta zuotian xia(-le) ban qu kan-le dianying*
 he yesterday off(-ACTL) work go see-ACTL movie
cai huijia
 then go-home
 “Yesterday, he went to the cinema after work before he went home”

These two sentences convey actualised events with respect to past reference times, as illustrated in Figure (4.3a) and Figure (4.3b) for examples (37a) and (37b). As in Figure 4.2, $ET_n = RT_{n-1}$, the only difference is $RT_3 < ST$, because the reference time is in the past and thus prior to the speech time. In Figure (4.3b), however, the reference time *zuotian* “yesterday” is an interval rather than a temporal point.³⁶ A common sense view of *yesterday* refers to the time span between 0:00–24:00 the day before. But the valid reference time for the event in (37b) is the span from the moment he went off work to the last moment of *yesterday*. Therefore, RT_3 is defined as the end of yesterday. As long as he went home by the last minute of the day before, it can be said that he went home *yesterday*. It should be noted that although the event *huijia* “go home” has no marker to indicate its actuality, it is nevertheless an actualised event, because like events 1 and 2, the actuality of this last event is also ensured by its reference time. Therefore, the actuality in relation to a past RT can be expressed schematically as $ET \leq RT < ST$.

(4.3a): Temporal schema for (37a):



(4.3b): Temporal schema for (37b):

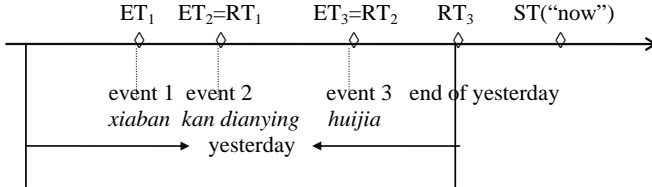


Figure 4.3. Temporal schema of actualised situations with a past RT

One interesting fact about actuality is the behaviour of the actual *-le* in sentences expressing complex events: ‘pivotal sentences’ and sentences with ‘serial verb constructions’. A sentence is called a pivotal sentence if its predicate consists of two verb phrases with the object of the first verb functioning at the same time as the subject of the second verb (cf. Kang & Lai 1990: 126). In such a sentence, the first verb often has a causative meaning, as in (38a); a sentence with serial verb constructions is also called ‘V-V series’ (Chao 1968: 327), as in (38b).

- (38) a. *shang-ge yue tamen qing zong-gongchengshi*
 last-CLF month they invite chief-engineer
jiang-le liang-ci xue
 give-ACTL two-CLF lecture
 ‘Last month they invited the chief engineer to give two lectures’
- b. *gangcai ta da dianhua jiao-le*
 just-now he make phone-call book-ACTL
yi-liang che (Dai 1997)
 one-CLF car
 ‘Just now he made a phone call to book a taxi’

According to Lü (1981: 315–316), the actual *-le* normally follows the second verb in these structures, as shown in (38). These sentences convey both an *action event* and a *purpose event*.³⁷ As the actuality of a purpose event naturally entails that of an action event, when the purpose event takes *-le*, the actuality

of both events can be ensured. Therefore, while the aspect markers of (38a/b) and (39a/b) differ, the meanings of (38a/b) and (39a/b) are equivalent:

- (39) a. *shang-ge yue tamen qing-le zong-gongchengshi*
 last-CLF month they invite-ACTL chief-engineer
jiang-le liang-ci xue
 lecture-ACTL two-CLF lecture
 “Last month they invited the chief engineer to give two lectures”
- b. *gangcai ta da-le dianhua jiao-le*
 just-now he make-ACTL phone-call book-ACTL
yi-liang che (Dai 1997)
 one-CLF car
 “Just now he made a phone call to book a taxi”

On the other hand, the actuality of an action event does not necessarily entail the actuality of a purpose event. When *-le* occurs only with the action event, the actuality of the purpose event cannot be ensured. The ambiguity of (40) compared with (38) is self-evident, though this is caused only by moving *-le* from the purpose events to the action events in the examples in (40):

- (40) a. *shang-ge yue tamen qing-le zong-gongchengshi*
 last-CLF month they invite-ACTL chief-engineer
jiang (liang-ci) xue
 lecture (two-CLF) lecture
 “Last month they invited the chief engineer to give (two) lectures (the chief engineer may or may not have come to give lectures)”
- b. *gangcai ta da-le dianhua jiao*
 just-now he make-ACTL phone-call book
(yi-liang) che (Dai 1997)
 (one-CLF) car
 “Just now he made a phone call to book a taxi (the taxi may or may not have come)”

It can be seen from the above that in pivotal sentences and sentences with serial verb constructions, *-le* may signal the actuality of one or both events. The event taking *-le* is normally the sentential focus. In sentences in (40), as the actuality of purpose events is ambiguous, these events are not the focus of these sentences. Therefore, the verbal classifier phrases may to all intents and purposes be left out, as indicated in the brackets.

The future reference time. When RT is posterior to ST (i.e. $ST < RT$), the actual *-le* signals the actuality of a situation in relation to a future RT. Consider the following example:

- (41) *wo mingtian xia-le ban qu kan dianying* (Dai 1997)
 I tomorrow off-ACTL work go see movie
 “I will go to the cinema after work tomorrow”

The temporal structure of the sentence is illustrated in Figure 4.4. In this sentence, the time word *mingtian* “tomorrow” refers to a future time. As event 2 “go to cinema” serves as the RT of event 1 “go off work”, the actuality of event 1 is ensured. It should be noted that as event 2 has no posterior RT, its actuality is at stake, thus **wo mingtian xia-le ban qu kan-le dianying* “I went to the cinema after work tomorrow” is unacceptable. In contrast, the actuality of events relative to a past or present RT can always be ensured. The contrast is illustrated by the acceptability of sentences in (42):³⁸

- (42) a. **wo mingtian kan-le dianying*
 *I tomorrow see-ACTL movie
 *“I went to the cinema tomorrow”
 b. *wo zuotian/jintian kan-le dianying*
 I yesterday/today see-ACTL movie
 “I went to the cinema yesterday/today”

From the discussion above, it is clear that the actuality in relation to a future RT can be expressed schematically as follows: $ST < ET \leq RT$, where $ST < RT$ implies a future RT, and $ET \leq RT$ is a condition that must be satisfied for a situation to be actualised. This rule also applies to the fictitious actuality in conditional clauses. Consider (10a), repeated here as (43):

- (43) *na jiahuo shao-cheng-le hui, wo ye neng ren-chulai*
 that guy burn-become-ACTL ash, I still can recognise
 “Even if that guy was burnt to ashes, I would recognise him”

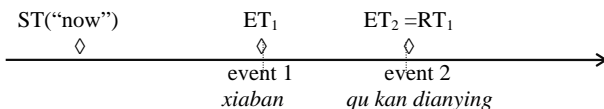


Figure 4.4. Temporal schema of actualised situations with a future RT

In this sentence, *shao-cheng hui* “burn to ashes” (E_1) and *ren-chulai* “recognise” (E_2), are both fictitious. But as E_2 serves as the RT of E_1 , the first event E_1 is actualised, but not the second event E_2 .

One exception to this rule is found in highly marked contexts. When the situation expressed in the conditional clause *equals* the situation expressed in the resultative clause, the actual *-le* can even appear in the latter clause without an anchoring RT, e.g.:

- (44) *yishu shi xuyao shijian de, hekuang gen-le ge*
 arts is need practice PRT, besides follow-ACTL CLF
hao daoyan, bu jiu dengyu zhao-le ge hao
 good director, not already equal get-ACTL CLF good
laoshi ma
 teacher PRT
 “Art requires practice; and moreover, working with a good director amounts to finding a good teacher”

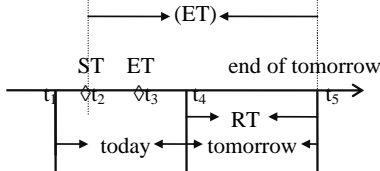
The discussion above suggests that actuality is closely related to a reference time. All situations that materialise in relation to a past or present RT are actualised and can take *-le*, because their ETs are always followed by the ST. This means that even for a single event that does not have a following event to serve as its RT and ensure its actuality, the ST plays that role.³⁹ A situation that materialises in relation to a future RT, however, does not have this advantage, because the ST always precedes its ET. In this case, only when a situation has a posterior or simultaneous RT can its actuality be ensured.⁴⁰ This explains the unacceptability of single-event sentences like (45a) and why the verb constellation expressing the last event (e.g. *kan dianying* “go to the cinema” in 45b) of complex events cannot take *-le*:

- (45) a. **mingtian si-ming ganjing likai-le Shaoyang*
 *tomorrow four-CLF policeman leave-ACTL Shaoyang
 *“The 4 policemen left Shaoyang tomorrow”
 b. **wo mingtian xia-le ban kan-le dianying*
 *I tomorrow off-ACTL work see-ACTL movie
 *“I went to the cinema after work tomorrow”
- (46) a. *mingtian, si-ming ganjing kending yijing*
 tomorrow, four-CLF policeman surely already
likai-le Shaoyang
 leave-ACTL Shaoyang
 “The 4 policemen will definitely have left Shaoyang by tomorrow”

- b. *mingtian ba-dian, si-ming ganjing kending*
 tomorrow 8-o'clock, four-CLF policeman surely
yijing likai-le Shaoyang
 already leave-ACTL Shaoyang
 "The 4 policemen will definitely have left Shaoyang by 8 o'clock tomorrow"

It is interesting to note the contrast between (45a) and (46a). The time word in both sentences is *mingtian* "tomorrow". Why is it then that (45a) is unacceptable and (46a) acceptable? To understand the actuality of a situation in relation to a future RT more clearly, it is necessary to distinguish between an ET and an RT.⁴¹ These two times are different in nature, though sometimes they can overlap. While an ET locates a situation temporally, an RT provides a demarcation line as to the temporal shape of a situation, i.e. whether the situation is actualised. The concept *tomorrow* in (45) is an ET, whereas in (46a) it is an RT. Therefore, an event that happens *at* a future time *tomorrow* (45a), if there is no posterior RT to ensure its actuality, is definitely unactualised. In (46a), however, as "tomorrow" is an RT, it stresses that the event happens *in relation to* "tomorrow", i.e. the ET may be an indefinite point during the span ranging from the ST to the end of *tomorrow*: it may happen at a moment either *today* after ST or *tomorrow*. When the time word is a temporal point rather than period, as shown in (46b), the distinction is more marked. The temporal structures of the events depicted in (46a) and (46b) can be illustrated as Figure (4.5a) and Figure (4.5b).

(4.5a): Temporal structures of (46a):



(4.5b): Temporal schema of (46b):

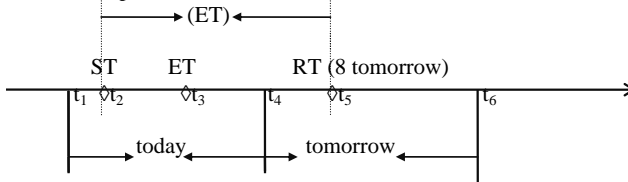


Figure 4.5. A comparison of an ET and an RT

In Figure (4.5a), the time span t_1-t_4 stands for *today*, and t_4-t_5 for *tomorrow*. The speech occurs at t_2 ($ST=t_2$), and the event occurs at t_3 ($ET=t_3$), which is an indefinite point between t_2 and t_5 ($t_2 < t_3 = ET < t_5$). The RT ranges from t_4 to t_5 ($t_4 < RT < t_5$). It can be seen from the figure that the ET and the RT may or may not overlap, thus $ET \leq RT$. In contrast, since the RT in Figure (4.5b) is a point ($RT=t_5$), there is no possibility of overlap (i.e. $ET < RT$). In this case, t_1-t_4 stands for *today*, and t_4-t_6 for *tomorrow*. The speech also occurs at t_2 ($ST=t_2$), and the event occurs at t_3 ($ET=t_3$), where t_3 is an indefinite point between t_2 and t_5 , i.e. $t_2 < t_3 = ET < RT = t_5$. These figures clearly demonstrate the distinction between an ET and an RT. This distinction is essential if one is to understand the actual aspect in Chinese.

Based on the discussion in the this section, the temporal structures of situations actualised in relation to the three reference times can be summarised in Table 4.3.

Table 4.3. Actuality with different RTs

Reference time	Temporal structure
Present	$ET \leq RT = ST$
Past	$ET \leq RT < ST$
Future	$ST < ET \leq RT$

4.1.5 The holisticity of *-le*

As one of the perfective viewpoints in Chinese, the actual aspect provides an external perspective from which a situation is presented holistically as a single whole. This means that the situation presented with the actual viewpoint is non-decomposable. Here a distinction should be drawn between logical decomposability and semantic non-decomposability. The semantic non-decomposability of a situation does not imply that the situation is not logically decomposable. For example, the situation of *Liu dancing on several occasions* in (47) is a logically decomposable event, but if the event is presented with the actual viewpoint, i.e. when *-le* is used as in (47a), it is viewed as a holistic entirety and is no longer decomposable semantically. Therefore, the logical decomposability is overridden by the semantic non-decomposability (cf. Dai 1997:60). If we want to decompose the event and focus only on part of the situation, we need to present the situation with an imperfective viewpoint (see chapter 5), e.g. the progressive as shown in modified alternative (47b).

- (47) a. *Liu Gangdou ye bei qingqu peitiao-le*
 Liu Gangdou also PASS invite-go dance-ACTL
haoji ci
 many times
 “Liu Gangdou was also asked on several occasions to dance”
- b. *Liu Gangdou ye zai tiaowu*
 Liu Gangdou also PROG dance
 “Liu Gangdou was dancing, too”

The holisticity of the actual aspect is clearly demonstrated by contrasting the following minimal pair cited from Dai (1997:43):

- (48) a. *caochang shang tongshi jinxing-le*
 playground on simultaneously hold-ACTL
liang-chang bisai
 two-CLF match
 “Two matches were held simultaneously on the playground”
- b. *caochang shang xianhou jinxing-le*
 playground on successively hold-ACTL
liang-chang bisai
 two-CLF match
 “Two matches were held successively on the playground”
- c. *caochang shang tongshi zai jinxing*
 playground on simultaneously PROG hold
liang-chang bisai
 two-CLF match
 “Two matches were being held simultaneously on the playground”
- d. **caochang shang xianhou zai jinxing*
 *playground on successively PROG hold
liang-chang bisai
 two-CLF match
 “Two matches were being held successively on the playground”

As the situation presented with the actual viewpoint is taken as a single whole, its internal temporal structure (e.g. the number of referents involved, the temporal sequence of these referents) needs no further differentiation (cf. section 2.4), as illustrated in Figures (4.6a) and (4.6b). That is, whether two matches were held simultaneously or successively was not of concern. Therefore (48a) and (48b) are both acceptable.

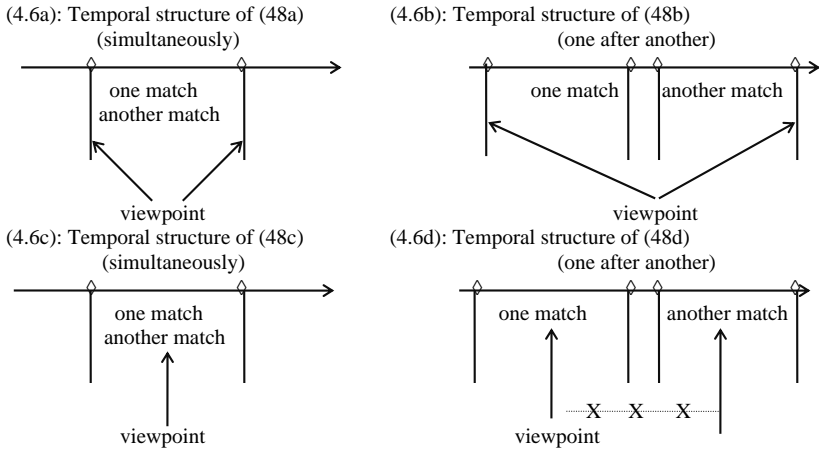


Figure 4.6. The holistic of the actual aspect

In contrast, the progressive *zai* presents a situation as imperfective with reference to its internal structure (cf. section 5.2.4). As such, two matches can only be held *simultaneously* rather than *successively*, as shown in Figures (4.6c) and (4.6d). That explains why (48c) is acceptable whereas (48d) is not.

Figures (4.6a-d) also show that (49) is ambiguous between (48a) and (48b), but (50) can only be interpreted as (48c):

- (49) *caochang shang jinxing-le liang-chang bisai*
 playground on hold-ACTL two-CLF match
 “Two matches were held (simultaneously or successively) on the
 playground”
- (50) *caochang shang zai jinxing liang-chang bisai*
 playground on PROG hold two-CLF match
 “Two matches were being held (simultaneously) on the playground”

The contrast between the progressive *zai* and the actual *-le* foregrounds the holistic feature of the actual aspect. Once *-le* is used in a sentence, the situation conveyed by the sentence is no longer decomposable. It should be reiterated that the entirety discussed here is related to the situation conveyed by a sentence rather than to the action denoted by a verb, therefore the entirety should be examined at the sentential level. Consider the following examples:

- (51) a. *zhe-ben shu wo zhi kan-le yiban (jiu bei ta*
 this-CLF book I only read-ACTL half (then PASS he
na-zou-le) (Dai 1997)
 take-away-ACTL
 “I have only read half of this book (when he took it away)”
- b. *Zhang Zhiwei zai jianyu li dai-le 88 tian le*
 Zhang Zhiwei zai prison in stay-ACTL 88 day COS
 “Zhang Zhiwei has stayed in jail for 88 days (He may or may not go
 on staying there)”

When a [+durative] situation is cut at a point, the segment prior to the point (like “read half a book” in (51a) or “stay in jail” in (51b)) is also presented in its entirety when the actual *-le* is used. We cannot say that these events are imperfective for the reason that the reading event is not completed (51a) or that he may go on staying in jail (51b). When the speaker chooses the actual viewpoint, even a segment of “a larger situation” is presented perfectly in its entirety. Whatever comes after that point is regarded as another situation, as in his going or staying in jail in (51b).

For a [–durative] situation, like the achievement “the bomb exploding” in (52a) and the semelfactive “waving his army cap” in (52b), its initial endpoint coincides with its final endpoint. The actual *-le* also focuses on its non-decomposability or holisticity. Even with an iterative reading as in (52b), his first waving is viewed as a single whole, and the following wavings are considered as independent holistic events.

- (52) a. *zhadan baozha-le*
 bomb explode-DBL
 “The bomb exploded”
- b. *Fu zhuren ye tiao-xia chemen, zhai-xia toushang*
 Fu director also jump-down car-door, take-off head-on
de junmao, huidong-le yi-xia
 GEN army-cap, wave-ACTL one-CLF
(you yi-xia...)
 (again one-CLF...)
 “Director Fu also jumped off the car, took off his army cap, and waved
 it once (and one more time...)”

Further evidence to argue for the holisticity of the actual viewpoint comes from the fact that an actualised situation cannot serve as the background

information in discourse, even if the situation itself is durative in nature. Compare the attested example (53a) and its modifications (53b-c):

- (53) a. *qi-yue 30 ri, Yu-jia xiongdi soucha Shen*
 July 30 date, Yu-family brother search Shen
bangongshi shi, faxian Wei Longshan shi Shen
 office when, find Wei Longshan is Shen
de linju
 GEN neighbour
 “On July 30th, when brothers of the Yu’s were searching Shen’s office, they found that Wei Longshan was Shen’s neighbour”
- b. *qi-yue 30 ri, Yu-jia xiongdi soucha-le*
 July 30 date, Yu-family brother search-ACTL
Shen bangongshi
 Shen office
 “On July 30th, brothers of the Yu’s searched Shen’s office”
- c. **Yu-jia xiongdi soucha-le Shen bangongshi*
 *Yu-family brother search-ACTL Shen office
shi, faxian [...]
 when, find
 “When brothers of the Yu’s searched Shen’s office, they found [...]”

As the English glosses show, the situation “search Shen’s office” is viewed imperfectively in (53a), therefore it can refer to a background situation with on-going internal stages; in (53b), the situation is presented with the actual viewpoint and serves as a foregrounded clause moving the narration forward. When a situation is viewed perfectly (in this case, taking *-le*), its internal stages are no longer visible and the situation can no longer appear in a backgrounded clause. That is why (53c) is ungrammatical.

4.1.6 The dynamicity of *-le*

As noted in section 3.2.1, dynamicity is necessarily related to change, which may be embodied in a heterogeneous temporal structure or changing points. The dynamic feature of the actual aspect is different from that of the experiential aspect (see section 4.2.5). It also differs from that of the progressive or durative aspect (chapter 5). The dynamicity of the progressive or durative aspect only relates to heterogeneous temporal structures but not to changing points because the progressive or durative aspect only focuses on the medial

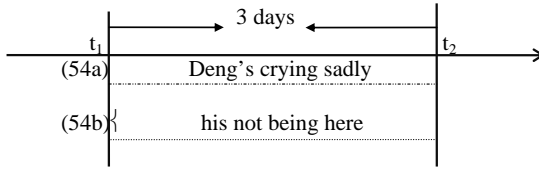


Figure 4.7. The dynamicity of the actual aspect

part (duration) of a situation.⁴² In contrast, the dynamicity of the actual aspect can focus on both heterogeneous internal structures and changing points. Consider the following examples:

- (54) a. *weici, Deng Lijun shangxin de ku-le san-tian*
 for-that, Deng Lijun sadly PRT cry-CTL three-day
 “For this reason, Deng Lijun cried sadly for three days”
- b. *Xianggang laoban juan-zhe women de qian*
 Hong-Kong proprietor grab-DUR we GEN money
taozou san-tian le
 escape three-day COS
 “The proprietor from Hong Kong has run away with our money for three days”

The temporal structures of these sentences are illustrated in Figure (4.7). In the figure t_1-t_2 is a period of three days. The line composed of one dash plus two dots stands for the heterogeneous internal structure of an event, while the dotted line stands for the duration after the instantaneous event marked by 了. In (54a), *ku* “cry” is a dynamic event, therefore when *-le* is used, the event of crying demonstrates the feature of heterogeneity throughout the specified duration from t_1 to t_2 , this type of dynamicity can be called ‘full dynamicity’. (54b) demonstrates the feature of ‘terminative dynamicity’, i.e. the change occurs at the final endpoint.⁴³ In this case, *taozou* “run away” is an instantaneous event (achievement): once he left, the event was actualised and he was no longer here, the duration “three days” refers to the period of his being absent from here.

The dynamicity of the actual aspect is more clearly demonstrated by its effects of coercing an *unbounded* stative situation into a dynamic one.⁴⁴ As noted in section 4.1.3, the actual *-le* interacting with unbounded states (either ILSs or SLSs) demonstrates the feature of ‘ingressive dynamicity’ which triggers these unbounded states into derived activities at the clause level.⁴⁵ Compare the attested example (55a) and its modification (55b):

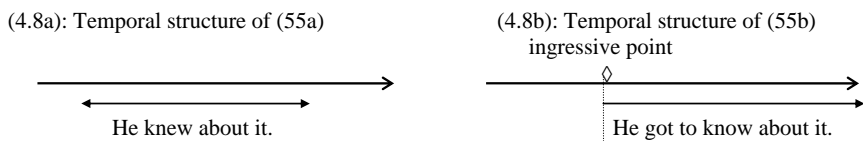


Figure 4.8. The actual *-le* coerces a state into an event

- (55) a. *zhe shi de neiqing ta dou zhidao de*
this matter GEN truth he all know PRT
“He knows all about it”
- b. *ta zhidao-le zhe shi de neiqing*
he know-CTL this matter GEN truth
“He got to know about it”

Like its English equivalent “know”, *zhidao* is an ILS verb which does not involve a changing point but only has a homogeneous temporal structure. Therefore it is normally used to denote a stative situation, i.e. he is in the state of knowing about it as in (55a). Here, the state is open-ended and can extend in both directions (forward and backward) without boundaries. When the actual *-le* is used (55b), however, the stative situation is coerced into a dynamic event: an ingressive point plus the resultant state. The ingressive point demarcates two different states (his not knowing and his knowing). Therefore, the resultant state can only extend forward uni-directionally. The difference between these two sentences is illustrated in Figure (4.8).

Although the actual viewpoint is normally marked overtly by *-le*, when other sentential elements interact to make the actuality of a situation explicit, it may also take a covert form (cf. section 5.5). Dai (1997) incorrectly argues that in addition to the aspect marker, many other (content) words can also indicate dynamicity. Let us examine some of his examples (Dai 1997:40):

- (56) a. *ta zuotian jiu zhidao(-le) zhe-jian shi*
he yesterday already know(-CTL) this-CLF matter
“He got to know about it as early as yesterday”
- b. *ta ganggang zhidao(-le) zhe-jian shi*
he just-now know(-CTL) this-CLF matter
“He got to know about it just now”

In these sentences, *zuotian* “yesterday”, *jiu* “already” (56a) and *ganggang* “just now” (56b) do not indicate dynamicity as Dai (1997) suggests, rather

they contribute to the actuality of the situation *ta zhidao zhe-jian shi* ‘his knowing about it’. And the actuality in turn lends this unbounded situation (ingressive) dynamicity.

Before leaving the discussion of the actual aspect, it is appropriate to give an account of the aspectual part of the sentential *LE*, which is closely related to the actual *-le* and referred to in this book as the change-of-state (COS) *le*.

4.1.7 The change-of-state (COS) marker *le*

As argued in section 4.1.1, any account of aspect in Chinese would be incomplete without including the COS *le*. In this section, we will give our account of the semantic functions of this morpheme. The sentential *LE* has oftentimes been incorrectly regarded in the literature as the ‘inchoative *le*’ without further differentiation (e.g. Li & Thompson 1981; Chan 1980; Christensen 1994; Kang 1999).⁴⁶ There are two problems with such a treatment of the sentential *LE*. On the one hand, the sentential *LE* in some cases has no aspectual meaning but functions only as a modal particle to mark the speaker attitude (cf. also Tiee 1986: 231; Henne et al. 1977: 13; Zhang 1995: 127).⁴⁷ As a weakened form of the modal particle *la*,⁴⁸ *LE* is typically distributed in sentences with adjectival predicates and often co-occurs with adverbs of degree denoting subjectivity like *tai* ‘too’ and *zui* ‘most’ (cf. Jin 1998). Consider the attested example (57a) and its modifications (57b-d):

- (57) a. *women wei ta fuchu de daijia tai da le*
 we for it pay GEN price too big PRT
 ‘The price we paid for it was too high’
- b. *women wei ta fuchu de daijia tai da la*
 we for it pay GEN price too big PRT
 ‘The price we paid for it was really too high’
- c. *women wei ta fuchu de daijia hen da*
 we for it pay GEN price very big
 ‘The price we paid for it was very high’
- d. **women wei ta fuchu de daijia hen da le*
 *we for it pay GEN price very big PRT
 ‘The price we paid for it was very high’

A few substitution tests help to prove that the sentence-final *LE* in (57a) is purely a modal particle without aspectual meaning. Firstly, let us remove the sentence-final *le* in (57a). It can be seen that such a removal does not affect its

aspectual meaning, but the mood of the speaker is changed: the rewritten sentence no longer has the emphatic force of the original sentence. Secondly, let us substitute *le* with *la* (57b). The substitution shows that the emphatic and exaggerative force is reinforced. Thirdly, if we substitute *tai* “too” or *zui* “most” with *more objective* ordinary adverbs of degree like *hen*, *shifen*, *feichang* “very, quite” (57c), the degree of quality denoted by the adjectival predicate also becomes more objective, and the modal particle *le* cannot appear in these sentences (57d). These tests show that when an adjectival predicate is modified by an adverb of degree, the sentence does not describe an objective state but only a subjective mood, to which aspect does not apply.

On the other hand, even the *aspectual part* of the sentential *LE* does not merely indicate inchoativeness. Chao (1968:798–800), for example, identifies seven functions of the particle *LE*. Only one of them is related to inchoativeness. Furthermore, the inchoative aspect is an imperfective viewpoint (see section 5.3). Therefore, in this book, the aspectual part of the sentential *LE* has a name of its own, i.e. the change-of-state (COS) marker.

The COS *le* has a number of semantic functions. Zhang (1995:118–119) compares three grammars and summarises the major properties the COS *le* as follows:⁴⁹

- (i) to denote a completed action as of the present, as in
 - (58) a. *wo huilai le* (Chao 1968:799)
I come-back COS
“I have come back”
- (ii) a change of state from not being to that of being, as in
 - b. *xiayu le* (Chao 1968; Liu 1986; Li & Thompson 1981)
rain COS
“It’s raining now”
- (iii) to indicate a change of quality or condition, as in
 - c. *ta zhidao na-ge xiaoxi le* (Li & Thompson 1981)
he know that-CLF news COS
“He knows about the piece of news now”
- (iv) to express a command, as in
 - d. *chifan le* (Chao 1968:798)
eat-meal COS
“Let’s eat now”

However, these functions can nearly all be grouped under one semantic category: “change of state/status” (Chang 1986: 34). Henne et al. (1977: 112) also argue that the COS *le* has the class meaning “such and such a situation has (now) come into being; from the present point of view, it must be realised that...” In all of these cases, the COS *le*, as the term suggests, marks a changing point from one state into another. In (58a), the change is from the state of “my not being here” to that of “my being here”; in (58c) the change is from the state of “his not knowing” to that of “his knowing”. A very important part of the basic idea conveyed by the COS *le* can be found in the example in (58b) *xiayu le* “It is raining now”. It is quite reasonable to assume that this sentence denotes a change from the preceding state of it not being raining to the current state of it being raining, but it is also quite plausible to assume that it may mark a change of *mental* state: it may have been raining for quite some time, and others may have noticed it, but now we are aware of the fact that it is raining. The COS *le* can even indicate a future change of state which is not yet completed, i.e. “imminent action” (cf. Christensen 1994) or “what happens next” (Li & Thompson 1981: 278). In the imperative in (58d), for instance, the COS *le* indicates the coming about of a new state, the change of state here is from “not eating” to “eating”. Consider the following examples:

- (59) a. *zhe yao duoshao qian yi-li,*
 this pill how-much money one-tablet,
wo quan mai-xia le
 I all buy-up COS
 “How much does each of these pills cost? I’ll buy them up”
- b. *lian-le zhengzheng yi-nian, Yang Bingming*
 practise-CTL whole one-year, Yang Bingming
kuai chushi le
 soon finish-apprenticeship COS
 “Having been trained for a solid year, Yang would soon complete his apprenticeship”

In these examples, the events have not yet occurred, or the new situations have not yet been realised, but they are about to be, either with the full intention that they will, as in (59a), or judged from the present state that they will, as in (59b). In these contexts, the COS *le* often co-occurs with adverbials indicating futurity like *yao*, *kuai(yao)* and *jiu(yao)* meaning “soon, immediately”.

It is interesting to note that no matter whether the COS *le* refers to a change of state in the past, present, or imminent future, *le* relates some situation, or its relevance or importance, to some particular reference time.⁵⁰ This finding is in conformity with Li, Thompson & Thompson (1982:22) who claim that the basic communicative function of the particle *le* is to signal CRS (Currently Relevant State).⁵¹ In fact, CRS is a feature that distinguishes the COS *le* from the actual *-le*. Compare the following examples (Li 1999):

- (60) a. *ta qu-le Faguo*
 he go-CTL France
 “He went to France”
 b. *ta qu Faguo le*
 he go France COS
 “He has gone to France”

The contrast between this pair is striking. (60a) simply denotes an actualised situation, and no more information is provided (e.g. whether he is still in France). Thus it is appropriate to use this sentence to describe his travelling itinerary; in contrast, (60b) indicates that his going to France is relevant to the “current” RT, in this case, the speech time “now” (cf. section 4.1.4). Thus it is appropriate to use (60b) to answer the question *Where is he?*

In the Weekly corpus, there are 175 instances of the COS *le* and 27 instances in which the morpheme has double functions. All of them involve a contrast between a current state and a previous state. When ambiguity arose as to whether *LE* in the sentence final position is an actual *-le* or a COS *le*, the context was consulted to check whether there is the CRS meaning. If there is the morpheme is considered as either a COS *le* or a double-role *LE*. Consider the following examples:

- (61) a. *yi-ge [...] bairen qingnian chuangru [...] yi-ge*
 one-CLF white youngest rush-into one-CLF
 jiaji zhensuo, yong buqiang xiang limian
 family-planning clinic, use rifle at inside
 de ren saoshe, ranhou taozou-le
 GEN people strafe, then escape-CTL
 “A white youngster rushed into a family planning clinic, and strafed
 people there with his rifle, and then ran away”

- b. *Xianggang laoban yi juan-zhe women de*
 Hong-Kong proprietor already grab-DUR we GEN
qian taouzou le
 money escape COS
 “The proprietor from Hong Kong has run away with our money”
- c. *feitu-men pa jingfang zhuibu, huangmang taocuan LE*
 bandits fear police pursuit, hurriedly flee DBL
 “In fear of the police’s pursuit, those bandits (have) fled in a flurry”

Without proper contexts, it would be difficult to tell the function of this sentence-final morpheme. But in the discourse, *-le* in (61a) is clearly the actual aspect marker, because it only focuses on the realisation of a series of events in the narrative but has no CRS meaning.⁵² In contrast, *le* in (61b) does not focus on the actualisation of the event *running away*, but rather relates the event to the current state that the narrator no longer had that sum of money. As the English gloss shows, the function of *LE* in (61c) is ambiguous even in its context. It may focus both on the actualisation of the event of the bandits’ fleeing and the current relevance of the event, that is, they were no longer where they had been.

According to Comrie (1976:62), “The perfect links a present state to a past situation, whether this past situation was an individual event, or a state, or a process not yet completed.” In more general terms he says that “the perfect indicates the continuing present relevance of a past situation.” In this sense, the English perfect is similar to the COS *le*,⁵³ though the two must not be conflated (cf. section 2.4). This point can be seen even more clearly when both the actual *-le* and the COS *le* co-occur in the same sentence.⁵⁴ Consider the following examples (Dai 1997):

- (62) a. *ta zai zhe'er zhu-le san-nian*
 he in here live-ACTL three-year
 “He lived here for three years (and he no longer lives here)”
- b. *ta zai zhe'er zhu-le san-nian le*
 he in here live-ACTL three-year COS
 “He has lived here for three years (and he may or may not go on living here)”

While (62a) only conveys an actualised situation, without reference to its relation to the current situation, (62b) shows that the actualised situation is relevant to the RT (in this case, the speech time), because the COS *le* after a quantity expression usually indicates the continuance of the situation (cf.

Henne et al. 1977:123; Zhang 1995:126). Thus sentences with only the actual *-le* are usually translated by the English simple past, those containing both the actual *-le* and the COS *le* are translatable by the perfect of persistent situation (see section 2.4).

Of course, even without the actual *-le*, the COS *le* would still denote a change from a previous situation into a new one. But in this case, the focus would not be on the current relevance but on the contrast between these two situations (cf. Zhang 1995:126; Jin 1998). For example:

- (63) *manman de, ta biande gengjia duochoushangan*
 gradual PRT, she become more sentimental
he youdian guaipi le
 and somewhat eccentric COS
 “Gradually, she became more sentimental and eccentric”

The COS *le* can also function as a complementary element to the actual *-le*. Chao (1968:248) notes that the actual *-le* is “obligatory after a verb for past action if it has a quantified object.” In other words, an expression consisting of a verb + *-le* followed by a simple object, i.e. without quantitative modification, is an incomplete utterance because something else is expected to follow (cf. also Henne et al. 1977:122).⁵⁵ For instance:

- (64) a. **women chi-le fan*
 *we eat-ACTL meal
 “We had our meal”
 b. *women chi-le san-wan fan*
 we eat-ACTL three-bowl food
 “We ate three bowls of food”
 c. *women chi-le fan le*
 we eat-ACTL meal COS
 “We have eaten”

As it stands, (64a) is an incomplete sentence, as the hearer may expect more information to follow.⁵⁶ But when the object is quantified, the sentence becomes acceptable (64b); or minimally, (64a) can also be made complete by the COS *le*, as in (64c). In this case, the COS *le* makes this past event relevant to the present time, as shown in the translation.

Our data shows that the COS *le*, unlike the actual *-le*, is not sensitive to a final endpoint. Since situations of any type may be related to the current state in one way or another, it follows that the COS *le* may interact with any

situation type (cf. also Li 1999; Yang 1995). The interaction between the COS *le* (including double-role *LE*) and situation types in the Weekly corpus is summarised in Table 4.4.

Table 4.4. Interaction between the COS *le* and situation types

Corpus	ILS	SLS	ACT	SEM	ACC	ACH	Total
Training	76	18	20	0	6	67	187
Test	6	3	1	0	0	5	15
Total	82	21	21	0	6	72	202
Percent	40.59%	10.4%	10.4%	0%	2.97%	35.64%	100%

The relatively high frequency of the COS *le* co-occurring with states (ILSs and SLSs combined accounting for over 50%) and achievements is expected. On the one hand, as noted above, the basic function of the COS *le* is to signal the Currently Relevant State (CRS). This means that the COS *le* treats a situation, whether stative or dynamic, as a state of affairs and claims that the state is currently relevant to some particular reference time (cf. Li & Thompson 1981:243). Hence, a stative situation will more readily interact with the COS *le* to contrast with the previous state of affairs. On the other hand, as achievements encode a result themselves, they also interact well with the COS *le* which has a perfect meaning (cf. Moens 1987). Examples in (65) demonstrate the interaction between the COS *le* and various situation types. No instance of semelfactives taking the COS *le* is found in the Weekly corpus. This is unsurprising considering the low overall frequency of semelfactives found in the corpus.

- (65) a. *jinguan ta zhiyou 25-sui, dan yi shi yi-ge*
 although she only-have 25-year, but already is one-CLF
5-sui nühai de mama le (ILS)
 5-year girl GEN mother COS
 “Although she is only 25, she is already the mother of a 5-year-old girl”
- b. *women yijing shi jingpi-lijin le* (SLS)
 we already are exhausted COS
 “We are already worn out”

- c. *ni yao huilai, sha dongxi dou buyao*
 you will come-back, what stuff all no-need
dai le (Activity)
 take COS
 “You will come back, so you don’t have to bring anything”
- d. *ni zhidao ta fanzui le ma*⁵⁷ (Accomplishment)
 you know he commit-crime COS PRT
 “Do you know that he has committed a crime?”
- e. *Liu zhidao youshui lai le* (Achievement)
 Liu know side-profit come COS
 “Liu knows that the opportunity has come for him to make a side profit”

4.2. The experiential aspect: *-guo*

The experiential aspect is one of the perfective viewpoints in Chinese. The aspect marker for this viewpoint is *-guo*. Like the actual aspect marked by *-le*, the experiential aspect also provides an external perspective, therefore a situation is likewise presented as a whole. But unlike the actual *-le*, which focuses on the actuality of a situation, *-guo* focuses on experientiality.⁵⁸ Nor is the experiential aspect identical to the English perfect. There are four types of perfect whereas the experiential *-guo* only corresponds to the perfect of experience (cf. section 2.4). In Klein et al. (2000:751, 754), however, the temporal schema of *-guo* is defined in the same way as the English perfect, though the authors declare “one important difference for 2-phase contents” (*ibid*:759).⁵⁹ Here, we will only examine 1-phase contents with which *-guo* is said to behave like the English perfect. Consider the following examples:

- (66) a. He has lived in London for three years.
 b. *ta zai Lundun zhu-guo san-nian*
 he in London live-EXP three-year
 “He once lived in London for three years”
 c. *ta zai Lundun zhu-le san-nian le*
 he in London live-ACTL three-year COS
 “He has lived in London for three years”
- (67) a. He has been to Oxford.

- b. *ta shang-guo Niuujin daxue*
 he attend-EXP Oxford university
 “He has attended Oxford University”

It is clear that (66a) is not equivalent to (66b). Hence, even with 1-phase contents, the Chinese *-guo* cannot be defined in the same way as the English perfect. In contrast, (66c) expresses exactly the same meaning as (66a), because (66a) is an instance of the perfect of persistent situation, which is translatable by the combination of the actual *-le* and the COS *le* (cf. section 2.4). The Chinese *-guo* can only be identified with the perfect of experience, as shown in (67).

The viewpoint aspect marked by *-guo* typically denotes the experientiality (section 4.2.3), holisticity (section 4.2.4), and dynamicity (section 4.2.5) of a situation. Before these semantic features are discussed, we must first clear away some confusion over the experiential marker (section 4.2.1) and examine the interaction between the experiential *-guo* and situation types (section 4.2.2).

4.2.1 The experiential *-guo* vs. the RVC *guo*⁶⁰

As an aspect marker, *-guo* was derived from the full verb *guo* “to cross, pass”, as in *guo he* “cross a river” and *guo guan* “to pass a barrier”. But the evolution from a content word to an empty marker was not immediate, rather it went through several stages. Consider the following examples:

- (68) a. *man -tian -guo -hai*
 hide-truth-from -sky -cross -sea
 “cross the sea by a trick – practise deception”
- b. *guo yi-tian jiu xiang guo yi-nian shide*
 spend one-day just like spend one-year PRT
 “One day seems like a year”
- c. *zhe-wei shencai kuiwei de hanzi lianshang*
 this-CLF figure great GEN man face-on
lüe-guo yi-si chouchang
 flicker-across one-CLF melancholy
 “Faint melancholy flickered across the face of this big and tall man”

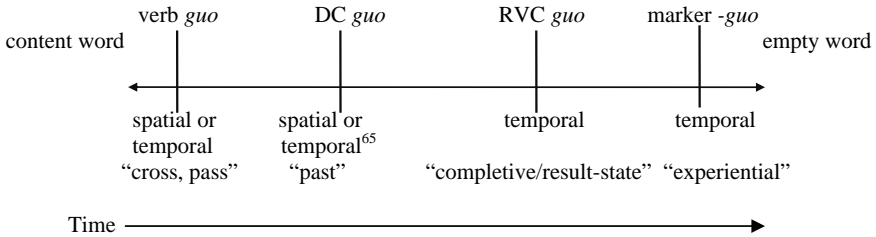
- d. 39-sui de Luobote Tuomasi yi zai yu-zhong
 39-year GEN Robert Thomas already in jail-in
duguo-le ta san-nian xingqi de tou
 spend-CTL he three-year sentence GEN first
si-ge yue
 four-CLF month
 “Robert Thomas, aged 39, has spent the first four months of his
 three-year sentence in jail”
- e. *zhuming daoyan Ling Zifeng xiansheng kan-guo*
 famous director Ling Zifeng mister read-RVC
juben shuo [...]
 script say
 “Mr Ling Zifeng, a famous film director, said after he read the
 screenplay [...]”
- f. *zai jiaohua de huli, ye taobuguo*
 no-matter-how wily GEN fox, still run-not-away
hao lieshou
 good hunter
 “However wily a fox is, it cannot escape a good hunter”
- g. *er tamen de guoshu zhijin hai mei jie-guo*
 but they GEN fruit-tree till-now still not yield-EXP
guo
 fruit
 “But so far their fruit trees have never borne any fruits”

These are interesting examples as they demonstrate the different meanings of *GUO* as they developed over time (see Figure 4.9). *GUO* was originally a semantically full verb which meant either “to cross” spatially (68a) or “to pass” temporally (68b). It became a “less full” content word when it developed into a directional verb complement (DC) meaning *past* spatially (68c) or *over* temporally (68d). Later on *guo* was also used as a completive RVC (cf. section 4.4.1) indicating completiveness (68e) or a result-state RVC indicating the resultant state of a situation (68f).⁶¹ Finally the morpheme “emptied” completely and was generalised as a marker signalling experientiality (68g).⁶² All of these usages are current in modern Chinese, though nowadays the morpheme *GUO* is mainly used as an aspect marker, as shown in Table 4.5.

The same morpheme *GUO*, though with different tones,⁶³ is loaded with all of the meanings discussed above, and these meanings form an “evolution

Table 4.5. Main uses of the morpheme *GUO* in the Weekly corpus⁶⁴

Corpus	Verb <i>guo</i>	DC <i>guo</i>	RVC <i>guo</i>	Marker <i>-guo</i>	Total
Training	30	15	7	75	127
Test	8	2	3	9	22
Total	38	17	10	84	149

Figure 4.9. The evolution chain of *-guo*

chain” of *-guo* (Figure 4.9). But in this book, only the experiential *-guo* and RVC *guo* (see section 4.4) will be discussed.

As can be seen in Figure 4.9, the half-empty directional complement (DC) *guo* and the RVC *guo* can both be interpreted in the temporal dimension. Consequently it is sometimes hard to tell them apart. But one point is clear: while the DC *guo* in the temporal dimension indicates temporal forwardness, the RVC *guo* normally indicates completiveness or the resultant state of a situation.⁶⁶ More difficult is the distinction between the RVC *guo* and the experiential *-guo*, which are often conflated in the literature. Consider the following examples:

- (69) a. *Zhangsan chi-guo fan meiyou* (Smith 1997)
 Zhangsan eat-RVC meal not
 “Has Zhangsan eaten yet?”
- b. *yi-nian duo lai, zaiye mei bai chi-guo*
 one-year more since, ever not free-of-charge eat-EXP
ren yi-dun fan
 other one-CLF meal
 “(He) has never eaten a free meal of others since more than one year ago”

The morpheme *guo* in (69a) is often regarded as the experiential *-guo* in the literature (e.g. Smith 1997:268; Zhang 1995:129; and Li & Thompson

1981:243), but no adequate account has yet been given for the cause which leads to the obvious difference between (69a) and (69b). Huang (1987:227) restricts *GUO* to being an experiential aspect marker, though he does note that *GUO* can indicate actuality when it appears in a daily active situation. But Huang's approach is open to question because (69b) denotes the same daily active situation *chifan* "eat-meal" as that in (69a); furthermore, it cannot explain why a "non-daily active situation" like that in (68e) does not signal experientiality.

Clearly, the speaker in (69a) is not interested in whether Zhangsan has had the experience of eating. What the speaker really wants to know is whether Zhangsan has already had a specific meal. Therefore, this situation is totally unrelated to Zhangsan's experience, and *guo* in this sentence cannot possibly be an experiential marker. But if we treat *guo* in (69a) as an RVC, the difference can be explained away easily: the RVC *guo* here signals completiveness of a situation in relation to the specified reference time (the default RT is the ST, cf. section 4.1.4). In this case, *guo* and the RVC *wan* "to finish, to complete" are interchangeable without any change of meaning.

As can be seen from the above discussion, the completive RVC *guo* denotes completiveness, whereas the aspectual marker *-guo* focuses on experientiality.⁶⁷ The difference between these two functions of *GUO* also provides a way to account for the interchangeability of *-le* and *guo* in the following examples:⁶⁸

- (70) a. *zuotian wo chi-guo wanfan yihou zhao-guo ni*
yesterday I eat-RVC supper after visit-RVC you
"I went to see you after I had supper yesterday"
- b. *zuotian wo chi-le wanfan yihou zhao-le ni*
yesterday I eat-ACTL supper after visit-ACTL you
"I went to see you after I had supper yesterday"
- (71) a. *mingtian ni chi-guo wanfan yihou lai zhao wo*
tomorrow you eat-RVC supper after come visit me
"Come to see me after you have supper tomorrow"
- b. *mingtian ni chi-le wanfan yihou lai zhao wo*
tomorrow you eat-ACTL supper after come visit me
"Come to see me after you have supper tomorrow"

Guo as it appears in the (a) examples is interchangeable without any change of meaning with *-le* as shown in the (b) examples. This is possible because both

the RVC *guo* and the actual *-le* can denote the completion of a situation, as happens in these examples (cf. section 4.1.2). Dai's (1997: 65) approach, which only differentiates between the actuality of *-le* and the experientiality of *-guo* without differentiating between the RVC *guo* and the experiential *-guo*, can only account for the interchangeability of *guo* and *-le* in situations with a past RT.⁶⁹ But the approach adopted in this book, as can be seen from the examples above, can account for the interchangeability of *-le* and *guo* in situations with both past and future reference times.

4.2.2 The interaction between the experiential aspect and situation types

Compared with the actual *-le*, the experiential *-guo* is less constrained in its interaction with situation types. It can interact with all situation types (cf. Yang 1995: 137; Li 1999: 222). There are 84 situations in the Weekly corpus taking the experiential *-guo*, the distribution of which is summarised in Table 4.6.

Table 4.6. Distribution of the experiential *-guo*

Corpus	ILS	SLS	ACT	SEM	ACC	ACH	Total
Training	5	1	21	1	34	13	75
Test	2	0	4	0	2	1	9
Total	7	1	25	1	36	14	84
Percent	8.33%	1.19%	29.76%	1.19%	42.86%	16.67%	100%

The table shows that the experiential aspect interacts with situations of any type, irrespective of their values of dynamicity, telicity or boundedness, though its distribution pattern is unbalanced. Here are some examples:

- (72) a. *jimo de huo-zhe, you jimo de siqu, jiuxiang*
 lonely PRT live-DUR, then lonely PRT die, as-if
shijian bu ceng you-guo wo yiyang (ILS)
 world not ever exist-EXP me PRT
 “(I) live in solitude, and will die in solitude, as if I had not existed in this world”
- b. *sui chenji-guo ji-nian [...]* (SLS)
 although obscure-EXP a-few-year
 “Although (he) remained in obscurity for several years, (Richard Gere)
 [...]”

- c. *dì'èr cì shìjièdàzhàn zhōng, zhèlǐ yě jìnxíng-guō*
 2nd CLF world-war during, here also go-on-EXP
jīliè de zhāndòu (ACT)
 fierce GEN battle
 “Fierce battles also raged here in WWII”
- d. *wǒ měiyǒu dà-guō ránhè rén* (SEM)
 I not beat-EXP any person
 “I have never beaten anybody”
- e. *wǒ měiyǒu bàn-guō zhèxiē shì* (ACC)
 I not do-EXP these thing
 “I have never done such things”
- f. *Zōu shèngchéng céng sān-cì zài zhènshàng*
 Zou assert once three-CLF on town-on
kāndào-guō ànfàn (ACH)
 spot-EXP criminal
 “Zou asserted that she had spotted the criminal three times in town”

4.2.3 The experientiality of *-guo*

The distinguishing feature of *-guo* is that it conveys a mentally experienced situation. In relation to a reference time, the final state of the same situation no longer obtains. The feature of experientiality is well recognised in the literature. Smith (1997:71, 266) refers to such a feature as “discontinuity” with a reference time; Li & Thompson (1981:228–229) and Tiee (1986:98) interpret this feature as the focus on “the event’s having been experienced at least once” and “being over” with respect to a reference time; according to Zhang (1995:129), the marker *-guo* describes “a situation bounded as an experience” and implies a “counter-situation” existing in the present, i.e. the old situation no longer exists; Dai (1997:63) also points out that the event conveyed by the experiential aspect has already happened relative to a reference time and is disconnected with that reference time.

Although expressed in different ways, the above citations point to the same fact: *-guo* conveys a situation already experienced anterior to a particular reference time. Because of this feature, the experiential *-guo* rarely occurs in future situations, nor does it co-occur with imperatives. Thus (73a) and (73b) are felicitous with the experiential aspect whereas (73c) and (73d) are not:

- (73) a. *ta shuaiduan-guo tui* (Smith 1997:267)
 he break-EXP leg
 “He broke his leg”
- b. *qunian ta shuaiduan-guo tui*
 last-year he break-EXP leg
 “He broke his leg last year”
- c. **mingtian ta shuaiduan-guo tui*
 *tomorrow he break-EXP leg
 *“He broke his leg next year”
- d. **he-guo cha!* (Li & Thompson 1981:230)
 *drink-EXP tea
 *“Please drank tea!”

In contrast, the actual aspect signalled by *-le* does not require a situation to be disconnected. Compare the following pair:

- (74) a. *ta dao Faguo qu-guo* (Li 1999)
 he go France go-EXP
 “He has been to France”
- b. *ta dao Faguo qu-le* (*ibid*)
 he go France go-ACTL
 “He has gone to France”

The English translations clearly show the difference between this pair. While (74a) indicates that he is no longer in France, (74b) gives no indication about the final state. The difference can be illustrated diagrammatically in Figure 4.10. In the figure, t_r stands for RT, and t_o for an indefinite temporal point anterior to t_r , while ET_{guo} represents the event time for the situation depicted with the experiential aspect, and ET_{le} is the event time for the situation presented with the actual aspect. The boundary for ET_{le} is t_r , and the boundary for ET_{guo} is t_o . The temporal points t_o and t_r do not overlap so that the

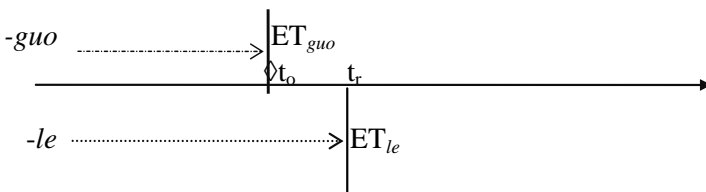


Figure 4.10. Contrast of *-guo* and *-le*

discontinuity is ensured with the reference time. The difference can also be expressed as:

- $ET_{guo} < t_r$
- $ET_{le} \leq t_r$

The experiential *-guo* often co-occurs with the adverb *ceng* or *cengjing* “ever, once” which strengthens the sense of experientiality in relation to a present or past RT.⁷⁰ If the focus is on *actuality* rather than *experientiality*, then *ceng* or *cengjing* cannot be felicitously used. The following modified example is ungrammatical:

- (75) **Xianggang zishen yueren Li Xiaotian ceng he Deng Lijun*
 *Hong-Kong senior musician Li Xiaotian ever and Deng Lijun
you-le shu-du hezuo
 have-ACTL a-few-CLF cooperation
 “Li Xiaotian, a senior musician in Hong Kong, has cooperated with Deng Lijun several times”

4.2.4 The holisticity of *-guo*

Like the actual *-le*, the holisticity of *-guo* lies in the external viewpoint from which a situation is presented in its totality. But unlike the actual aspect which presents a situation as an *actualised* whole, the experiential aspect presents it as an *experienced* whole. It should be noted that totality here refers to the non-decomposability of the situation depicted by a sentence rather than to the completion of the action denoted by a verb. Non-decomposability means that a situation is viewed as a single whole from an external perspective, it does not mean that the situation itself cannot be logically decomposed (cf. section 4.1.5). Consider the follow example:

- (76) *Cui Yujuan de fuqin lai-guo san-ci*
 Cui Yujuan GEN father come-EXP three-CLF
 “Cui Yujuan’s father has been here three times”

In this situation, the verbal classifier phrase *san-ci* “three times” indicates the event *lai* “come” is logically decomposable. But when the experiential *-guo* is used, the event is no longer semantically decomposable, because the speaker chooses to regard his coming three times as a non-decomposable whole.

It has often been argued in the literature that only a repeatable situation can occur with the experiential aspect, i.e. *-guo* cannot be used in nonrepeatable

situations (e.g. Smith 1997:268; Li & Thompson 1981:230; Zhang 1995:128; Dai 1997:62). Consider the following examples:

- (77) a. **ta si-guo*⁷¹ (Li & Thompson 1981:230)
 *he die-EXP
 *‘‘He has died before’’
- b. **ta lao-guo* (Zhang 1995:128)
 *he old-EXP
 *‘‘He has been old before’’
- c. **1956 nian, ta zai Beijing daxue*
 *1956 year, he in Beijing university
bi-guo ye (Dai 1997:62)
 complete-EXP course
 *‘‘He once graduated from Beijing University in 1956’’

All of the situations depicted in (77), such as *si* ‘‘to die’’, *lao* ‘‘to grow old’’, *biye* ‘‘to graduate’’ are nonrepeatable,⁷² therefore these sentences are all ill formed. Because the experiential aspect usually requires a repeatable situation, Smith (1997:268) argues that ‘‘-*guo* functions as a temporal quantifier [i.e. ‘verbal classifier phrase’ in our terms] ranging over a set of situations’’ and ‘‘presents a given situation as a member of a set.’’ This implies that the set contains at least one member. Wang (1965:458), Chao (1968:251) and Li & Thompson (1981:226) also claim that the experiential *-guo* signals that an event has happened or been experienced ‘‘at least once’’, usually in the indefinite past. But it can be argued that the number of occurrences should not be over-emphasised, and that repeatability of a situation is a *sufficient*, but not a *necessary* condition for it to take the experiential *-guo*. Therefore, it is inappropriate to express the aspectual meaning of *-guo* as ‘‘experienced at least once.’’ Moreover, not all situations can be counted by the number of occurrences (cf. Dai 1997). Consider:

- (78) a. *ta dang-guo bing, da-guo ji-ci zhang*
 he is-EXP soldier, fight-EXP a-few-CLF battle
 ‘‘He was once a soldier and fought several times in the battlefield’’
- b. *ni shou-guo daxue jiaoyu, zenme hui zuochu*
 you receive-EXP college education, how can do
zhe-zhong shi? (Dai 1997:63)
 this-kind thing
 ‘‘You have had a college education. How come you have done such a thing?’’

- c. *Ma, nin jiu meiyou zuo-guo nühaizi ma?* (*ibid*)
 Mom, you ever not be-EXP girl PRT
 “Mom, haven’t you been a girl yourself?”

While the situation *dazhang* “to fight in the battlefield” is repeatable and can be counted, those of *dangbing* “to be a soldier” (78a), *shou jiaoyu* “have an education” (78b), *zuo nühaizi* “be a girl” (78c) are either too abstract to be repeated and counted or cannot be repeated because one can only experience once in a lifetime (cf. Dai 1997:63).

Therefore, no matter whether a situation is or is not repeatable and countable, no matter whether a situation is or is not logically decomposable, once the speaker chooses the experiential viewpoint to present it, the situation becomes a holistic whole. And like all other perfective viewpoints, the experiential aspect cannot serve as background information in narrative discourse (cf. section 4.1.5).

4.2.5 The dynamicity of *-guo*

Smith (1997:266) and Li (1999:222) claim that the experiential aspect presents a stative situation type of a resultant state of affairs. But we argue that dynamicity is one of the semantic features of the experiential aspect.

The experiential aspect presents a situation as having been experienced historically. A dynamic situation that occurred or a stative situation that held historically undoubtedly involves change. The dynamicity denoted by *-guo* is attributable to *experiential change*. For example, his breaking his leg in (73a) is an experienced event, with *-guo* indicating the *experiential change* in the state of his leg: from being healthy, to being broken, to healing. The dynamicity denoted by *-guo* is more evident in situations with stative verbs as predicates and contrasts sharply with the dynamicity conveyed by the actual *-le*. Compare:

- (79) a. *ta dang-guo bing*
 he is-EXP soldier
 “He was once a soldier”
 b. *ta dang-le bing*
 he is-ACTL soldier
 “He became a soldier”

As shown in the English translations, *-guo* interacting with stative verbs semantically denotes ‘egressive dynamicity’, namely, a change out of the state of being a soldier in (79a). On the contrary, *-le* interacting with stative verbs semantically conveys ‘ingressive dynamicity’ (cf. section 4.1.6), namely, a change into the state of being a soldier in (79b). Because of this egressive connotation, the state verbs whose meanings are incompatible with egressiveness, such as *baohan* ‘to contain’, *baokuo* ‘to include’, *chongman* ‘to embody, to contain’, *rende* ‘to recognise’, *renshi* ‘to understand’, *renwei* ‘to think, to deem’, *xing* ‘to be surnamed’ and *zhidao* ‘to know’, cannot co-occur with the experiential *-guo*, unless in highly marked situations or in the negative. Consider the following examples:

- (80) a. **dangdi nongmin zhidao-guo na gezha*
 *local farmer know-EXP that chrome-dreg
youdu
 poisonous
 ‘Local farmers knew that those chome dregs were poisonous’
- b. ?*ta xing-guo Zhang* (Dai 1997)
 ?he surname-EXP Zhang
 ‘He was (once) surnamed Zhang’
- c. *wo congwei renshi-guo na ge ren* (*ibid*)
 I never know-EXP that CLF person
 ‘I have never known that person’

It is clear that (80a) is ill formed because of the incompatibility noted above. (80b) is only felicitous in a marked situation in which he has changed his surname for some special reason, while (80c) is felicitous because the situation, together with the experientiality, is negated.

4.3. The delimitative aspect: verb reduplication

Another viewpoint aspect falling within the category of perfectives in Chinese is the delimitative aspect, which is marked by verb reduplication to present a holistic transitory situation. Verb reduplication includes a verb and its reduplicant, usually with a tonal modification (cf. Henne et al. 1977: 133). When a verb is used in this way, it typically means doing something ‘a little bit’, or for a short period of time (Li & Thompson 1981: 232). More specifically, reduplication of [+durative] verbs reduces the duration of events, and reduplication

of [–durative] verbs reduces the iteration frequency of events. Following Li & Thompson (1981), we refer to this viewpoint as the delimitative aspect, which demonstrates the features of transitoriness (section 4.3.3), holisticity (section 4.3.4) and dynamicity (section 4.3.5). But before these features are discussed, we will first define the scope of forms and meanings of verb reduplication (section 4.3.1) and examine the interaction between verb reduplication and situation types (section 4.3.2).

4.3.1 The forms and meanings of verb reduplication

Verb reduplication is a prominent linguistic form in Chinese.⁷³ Only verbs with the features of [+dynamic] and [–result] can be reduplicated (cf. Li & Thompson 1981:234–235; Dai 1997:71).⁷⁴ ILS and achievement verbs cannot be reduplicated to convey the delimitative meaning because of semantic constraints (cf. section 4.3.2). Thus we cannot say:

- (81) a. **ni pang-pang* (Li & Thompson 1981:234)
 *you fat-fat
 *“you fat-fat”
 b. **ni da-kai da-kai na-ge men* (*ibid*:235)
 *you hit-open hit-open that-CLF door
 *“you open-open that door”

Li & Thompson (1981:234) further argue that action verbs that can undergo reduplication must be volitional verbs. Ma (1992) and Li (1996) also define candidates for reduplication as “volitional durative verbs” and exclude non-volitional verbs and volitional nondurative verbs from the rank. But in fact, although the majority of verbs for reduplication are volitional verbs, non-volitional verbs can also be reduplicated, as in *chelun zhuan-zhuan you bu zhuan le* “The wheel turned a little and then stopped” (Zuo 1997). The relevance here is that only volitional verbs can be extended to denote a *tentative* meaning whereas nonvolitional verbs cannot. We also argue against Ma’s (1992) exclusion of nondurative verbs from candidates for reduplication. As a matter of fact, what verb reduplication focuses upon is not the semantic property of durativity, but rather that of non-durativity (cf. also Dai 1997:72).

There is no general agreement as to the forms of verb reduplication. Some authors argue that verb reduplication should be taken in its strict sense and thus they only include the format of AA in their discussions (e.g. Lu & Yu

1954; Zhu 1981; Chao 1968:204; Henne et al. 1977:134);⁷⁵ some others assert that some special elements, such as *yi* “one”, *-le*, and *-le yi* can be inserted between the verb and its reduplicant to form *A yi A*, *A -le A*, *A* and *-le yi A*. For example, He (1962) and Wang (1963) mention *AA* and *A -le A*; Smith (1997:271) only mentions *AA* and *A yi A*; Li & Thompson (1981:232–236) discuss three types: *AA*, *A yi A*, *A* and *-le yi A*;⁷⁶ Fan (1964) and Li (1996) include *AA*, *A yi A*, *A -le A*, and *A -le yi A* in their discussions.

We want to argue that the basic form of verb reduplication is *AA*,⁷⁷ with the format *A -le A* functioning as a complex viewpoint – a hierarchical combination of the actual aspect and the delimitative aspect, conveying a transitory event which has been actualised. As already observed by some scholars (e.g. Wang 1944:297; Henne et al. 1977:134; Li & Thompson 1981:233; Xiao & Li 1988), verb reduplication *AA* is clearly different from the structure of cognate object *A yi A* or “verb + verbal classifier phrase” *A yi xia* “do something once”.⁷⁸ Compare the following pairs of examples:

- (82) a. (When taking a photo, the cameraman tells you)
xiao yi xiao
 smile one smile
 “Show me a smile (or: Say *cheese*)”
- b. *ta kuxiao-le yi-xia shuo [...]* (CED 1997)
 he bitter-smile-ACTL one-CLF say
 “He gave a bitter smile and said [...]”
- c. *ta xiao-le xiao shuo [...]*
 he smile-ACTL smile say
 “He smiled a little and said [...]”

It is obvious that the numeral *yi* “one” plus the reduplicant of *xiao* “smile” (82a) functions like a verbal classifier phrase just like *yi-xia* “one time, once” in (82b),⁷⁹ the function of which is clearly different from the delimitativeness of verb reduplication in (82c). However, although the structural differences are clear enough, it is interesting to note that the function of such verbal classifier phrases sometimes overlap with that of verb reduplication. Henne et al. (1977:134), for example, find it difficult to differentiate between the functions of these two structures in a sentence that contains both:

- (83) *jintian wanshang qing ni dao wo jia*
 today evening please you come my home

zuo yi-zuo tantan (Henne et al. 1977:134)

sit one-sit talk-talk

“Please come to my home tonight to sit and chat for a while”

It is such an overlap that has caused confusion of these two structures in previous studies of aspect in Chinese, we believe.

Like the form of verb reduplication, the meaning conveyed by this structure is also an issue that has aroused much controversy. The following meanings have been proposed to be related to verb reduplication:

- (i) *delimitativeness* (Li & Thompson 1981) or *transitoriness* (Lü 1942; Dai 1997);
- (ii) *tentativeness* (Lü 1942; Chao:1968; Smith, 1997; Li 1996)
- (iii) *slightness, casualness* (Fan 1964; Li 1996)
- (iv) “*milder*” *requests* (Smith 1997:271)

It can be argued that the central meaning denoted by verb reduplication is delimitativeness or transitoriness, while all of the others are merely pragmatic extensions of this core meaning in particular contexts. The extension of delimitativeness to denote tentativeness, for example, is constrained by a number of contextual elements:

- (i) the reduplicated verb must be a volitional verb;⁸⁰
- (ii) the subject of the sentence must be animate;
- (iii) the sentence must convey a future event, especially imperatives.

When a reduplicated volitional verb takes an animate subject to denote a future event, all of these elements contribute to the tentative reading. There must be some reason for a living creature (most probably a human being) to be engaged in a transitory activity, and one basic reason is for a tentative try, especially when a future event to be carried out is being talked about. For example:

(84) *jiao wo gei paichusuo zai xie feng xin wen-wen*

ask me to police-station again write CLF letter ask-ask

“(he) asked me to write to the local police station again to inquire about it”

The three elements, however, are only *necessary* rather than *sufficient* conditions for reduplicated verbs to denote a tentativeness meaning. Even if these conditions are satisfied, reduplicated verbs do not *necessarily* carry a tentative-

ness implication. For example, of the 24 future events presented with the delimitative aspect in the Weekly corpus,⁸¹ only five allow tentative readings, with all of the others denoting the delimitativeness meaning. For example:

- (85) a. *wo cai 45-sui, zong xiang zhao dian*
 I only 45-year, always want find some
shiqing gan-gan
 thing do-do
 “After all, I am only 45 and want to find something to do”
- b. *wo xian xiaqu dating-dating zai shuo*
 I first go-down enquire-enquire then say
 “Let me get off (the car) and ask about it first before taking action”

It can be seen from these examples that tentativeness is not an essential quality of verb reduplication, rather it is an extension of delimitativeness in the pragmatic dimension (cf. also Dai 1997: 79; Zuo 1997). Likewise, the same can be said of such qualities as *slightness* or *casualness*. Consider the following examples:

- (86) a. *wo dao Beijing chuchai, shunbian lai*
 I come Beijing for-business, in-passing come
kan-kan nimen
 look-look you
 “I am on a business trip to Beijing and drop in on you”
- b. *wo henshao chumen, duo zai jia kan-kan shu,*
 I seldom go-out, all at home read-read book,
ting-ting yinyue
 listen-listen music
 “I rarely go out, staying at home reading a bit and listening to some music”

While it is true that in certain contexts reduplicated verbs may carry a sense of slightness or casualness, the quality of slightness or casualness is not essential to verb reduplication. In the following sentences, for instance, no trace of slightness or casualness can be detected.

- (87) a. *gai dong jiu dong-dong ta*
 necessary do then do-do him
 “Beat him up when necessary”

- b. *deng wo zai zixi kan-kan*
 let me again carefully look-look
 “Let me take a careful look”

Smith (1997:271) suggests that verb reduplication is “often used to refer modestly to one’s own activities, or for a mild imperative.” Compare the corpus example (88a) and its modification (88b):

- (88) a. *jiu-jiu wo de liang-ge nü'er*
 save-save I GEN two-CLF daughter
 “Rescue my two daughters, please”
 b. *jiu wo de liang-ge nü'er*
 save I GEN two-CLF daughter
 “Rescue my two daughters”

The request in (88a) is indeed milder than that in (88b) as Smith expects, because the delimitativeness carried by verb reduplication “reduces the ‘weight’ of the request on the hearer by saying that the action can be done ‘just a bit’” (Li & Thompson 1981:236). However, again, the mildness implication is only an extension of the delimitativeness meaning.

There are 38 instances of verb reduplication in the Weekly corpus. While all of them have a delimitative reading, only 13.16% allow a tentative reading, 26.32% allow a casualness reading, and 15.79% allow a mildness reading, as shown in Table 4.7.

Table 4.7. Meanings of verb reduplication

Corpus	Delimitativeness	Tentativeness	Casualness	Mildness
Training	34	5	9	6
Test	4	0	1	0
Total	38	5	10	6
Percent	100%	13.16%	26.32%	15.79%

This piece of evidence argues strongly for our treatment of delimitativeness as the central meaning of verb reduplication and all other auxiliary qualities like tentativeness, casualness and mildness as extensions from this central meaning.

4.3.2 The interaction between the delimitative aspect and situation types

As noted in section 4.3.1, only [–result] action verbs can be reduplicated. This means that the delimitative aspect can only interact with dynamic situations encoding no result. Of the 38 reduplicated verbs found in the Weekly corpus, there are 36 activities and two semelfactives.

As no actionality is involved in statives, both ILSs and SLSs are normally incompatible with the delimitative meaning of “doing something a little bit.” Therefore, sentences like **ta congming-congming* “He is a bit clever” and **ta bing-bing jiu hao le* “He was cured after being a bit ill” are both unacceptable.

Our data shows that activities and semelfactives can interact felicitously with the delimitative aspect, because these two types of situations denote actionality but do not encode a result. As such, situations like *kan-kan shu* “read a bit”, *tiao-tiao wu* “dance a bit”, *mo-mo koudai* “felt a bit in his pocket”, and *dou-le dou shou* “shook his hand a bit” are all felicitous.

Accomplishments imply a result and achievements encode a result. Verb reduplication signifies delimitativeness. Accomplishments and achievements are incompatible with the delimitative aspect. Expressions like **xie-xie yi/zhe-feng xin* “write a/this letter a bit” and **ying-ying na-chang bisai* “win that match a bit” are both ill-formed. But note that the verb denoting the process part in a complex achievement can be reduplicated, as in *qiao-qiao-sui* “hit broken” and *chi-chi-wan* “eat up”. In these cases, *qiao* “hit” is a semelfactive verb which does not have an inherent final spatial endpoint; and *chi* “eat” is an accomplishment verb which, without an direct argument, behaves exactly like an activity verb (cf. section 3.3.2).

4.3.3 The delimitativeness of verb reduplication

As noted above, the central meaning denoted by verb reduplication is delimitativeness. This means that a short duration (i.e. transitoriness) and/or a low iteration frequency are the basic qualities indicated by the delimitative aspect. Note, however, that the temporal property of transitoriness, like durativity (see section 3.2.2), is an abstract mental concept rather than a physical concept. That is, duration cannot be measured on a time scale (cf. section 3.2.2). This explains why verb reduplication is incompatible with a time word indicating a specific duration as its complemental modifier.⁸² Therefore expressions like **kan-kan yihui'er shu* “read books a bit for a while” are not acceptable. Because of the psychological nature of transitoriness, we cannot say that

one minute is short while one day is not (cf. Dai 1997:75). In fact, the length of time an event takes is one thing – whether the speaker regards it as a short or long duration is another (cf. section 3.2.2). If a speaker conceives of a situation as having taken a short duration, he/she will choose verb reduplication to denote this delimitative meaning. The following pair illustrates this:

- (89) a. *ta kan-zhe wo*
 she look-DUR me
 “She kept looking at/stared at me”
 b. *ta kan-kan wo*
 she look-look me
 “She took a look at me”

As the English translations show, the same event of *kan* “to look” can be conceived of either as durative or as delimitative. While *-zhe* highlights the durativity of the event (89a), verb reduplication focuses on the delimitativeness of the event (89b).

4.3.4 The holisticity of verb reduplication

Holisticity is a common feature of perfective viewpoints. The holistic feature of the delimitative aspect lies in the fact that the viewpoint from which a situation is presented is located externally so that the internal structure of the situation is viewed as an inseparable whole. Consider the examples in (89). In (89a), as the viewpoint from which the event *kan* “look” is presented is within its internal temporal structure, only a section, namely, its duration is focused on. In contrast, the same event is conceived of as transitory in (89b), because the speaker chooses an external viewpoint to present it in its entirety, and its duration can no longer be singled out for emphasis.

The holistic feature of the delimitative aspect is also reflected by its almost unrestricted distribution in contexts denoting future situations. This feature distinguishes the delimitative aspect from the actual and the experiential aspects. As noted in section 4.2.3, the experiential aspect, being constrained by its experientiality, can rarely be used for future situations. Likewise, the actual aspect can only be used for a future situation when there is a reference time to guarantee its actuality (cf. section 4.1.4). In contrast, there is no such constraint on the delimitative aspect. Reduplicated verbs can occur freely in sentences denoting future situations. Some verbs, when reduplicated, can only

occur in sentences conveying future situations. These verbs are mostly disyllabic, such as *aihu* “to cherish”, *aixi* “to treasure”, *bangzhu*, “to help”, *gaige* “to reform”, *guanxin* “to be concerned about”, *mingbai* “to understand”, *mingque* “to make clear”, *qianjiu* “to give in to”, and *tichang* “to advocate” (cf. Dai 1997:74). Reduplicated verbs are also found in abundance in imperatives and sometimes in conditional clauses. In these contexts, verb reduplication is actually also used to refer to real or fictitious future events. Of the 38 instances of verb reduplication found in the Weekly corpus, 24 are related to future events. Although such evidence cannot lead to the conclusion that delimitativeness is closer to futurity, it does at least show that reduplicated verbs distribute quite freely in contexts conveying future situations. For example:

- (90) a. *nimen ye lai guo-guo yin* (imperative)
 you also come satisfy-satisfy addiction
 “Come and enjoy yourselves too”
- b. *ni jianghua yao dong-dong wei* (futurity)
 you speak must understand-understand flavour
 “You should be sensible when you talk with him”
- c. *ni yaoshi gei wo zhi-zhi Li-jia de men,*
 you if for me point-point Li-family GEN door,
wo yuan gei ni guixia (conditional)
 I will for you kneel-down
 “If you point at the door of the Li’s, I’m willing to kneel down for you”

In short, the delimitative aspect presents a situation as a holistic whole. It is its feature of holisticity that justifies the delimitative aspect as one of the perfective viewpoints. Although controversy arises regarding the forms and meanings of verb reduplication, there is not much disagreement as to its perfectivity. While Christensen’s (1994) claims that “in certain contexts it can also indicate perfectivity” is conservative, Smith (1997:271) refers to verb reduplication as “a lexical perfective”. In Dai (1997), verb reduplication is directly treated as a subcategory of the perfective aspect.

4.3.5 The dynamicity of verb reduplication

Of the four perfective viewpoints in Chinese, verb reduplication demonstrates the strongest sense of actionality or dynamicity. As noted in section 4.3.1, only [+dynamic] verbs can be reduplicated. When these verbs are reduplicated,

their sense of dynamicity is strengthened. The dynamic feature demonstrated by verb reduplication not only involves the change associated with initiation and termination, it is related to the process (albeit its transitory nature) as well. Compare the attested example (91a) and its modified alternatives (91b-c):

- (91) a. *Wu Xumang kan-le zuo'an shi liuxia*
 Wu Xumang look-**ACTL** commit-crime when leave
de jiaoyin [...]
 GEN footprint
 “Wu Xumang examined the footprint left on the criminal scene”
- b. *Wu Xumang kan-guo zuo'an shi liuxia*
 Wu Xumang look-**EXP** commit-crime when leave
de jiaoyin
 GEN footprint
 “Wu Xumang has examined the footprint left on the criminal scene”
- c. *Wu Xumang kan-le kan zuo'an shi*
 Wu Xumang look-**ACTL** look commit-crime when
liuxia de jiaoyin
 leave GEN footprint
 “Wu Xumang took a brief look at the footprint left on the criminal scene”

Although the varying degrees of dynamicity cannot be reflected in the translations, the event conveyed by (91c) is “more dynamic” than those depicted by (91a) and (91b). The whole event (despite its transitoriness) as presented is fully dynamic with the delimitative aspect. The contrast becomes more striking when these perfective viewpoints occur with a stative verb constellation.⁸³ Consider the following pair from Dai (1997:71):

- (92) a. *ta hong-le lian*
 she red-**ACTL** face
 “She blushed”
- b. *ta hong-guo lian*
 she red-**EXP** face
 “She has once blushed”
- c. *ta hong-hong lian*
 she red-red face
 “She blushed up”

With an unbounded stative situation *honglian* ‘to flush’, the actual *-le* indicates ingressive dynamicity (cf. section 4.1.6), i.e. her face changing into the state of being red (92a); the experiential *-guo* involves egressive dynamicity (cf. section 4.2.4), i.e. her face changing out of the state of being red (92b). The reduplicated predicate *hong-hong* in (92c), however, indicates ‘full dynamicity’. That is, the whole process of the transitory event is full of change.

4.4. The completive aspect: RVCs⁸⁴

In previous research on aspect in Chinese, much attention has been paid to well-established aspect markers like *-le* (section 4.1), *-guo* (section 4.2) and *-zhe* (section 5.1). But other ways of conveying aspectual values, such as verb reduplication (section 4.3) and resultative verb complements (RVCs), have largely been overlooked until recently. In fact, RVCs not only contribute to situation aspect (cf. section 3.4.1), but function to perfectivise situations as well (cf. Smith 1997:283). Of all of the ways to indicate perfectivity in Chinese discourse, using RVCs is by far the most productive (see section 1.3; cf. also Christensen 1994). This point is well illustrated by the quantitative contrast of perfective markers found in the Weekly corpus, as shown in Table 4.8 below. It can be seen from the table that the distribution patterns in the Weekly training corpus and the test corpus show a quite striking similarity.

Table 4.8. Distribution of perfective markers

Corpus	<i>-le</i>	<i>-guo</i>	Reduplication	RVCs	Total
Training	1,042	75	34	1,553	2,704
Test	123	9	4	188	324
Total	1,165	84	38	1,741	3,028

In this section, we will examine the completive aspect marked by RVCs,⁸⁵ which demonstrates the features of completiveness (section 4.4.3), holisticity (section 4.4.4) and dynamicity (section 4.4.5). But before these features are discussed, we will make an introduction to RVCs in Chinese (section 4.4.1) and examine the interaction between the completive aspect and situation types (section 4.4.2).

4.4.1 RVCs in Chinese

An RVC denotes the phase, resultant state, or direction of the action denoted by its preceding verb in a resultative compound. The element occupying the complementary position can be an adjective or a verb.⁸⁶ While most complements retain their lexical meanings just as they are used as adjectives or verbs, some may be extended or used metaphorically. For example, Li & Thompson (1981:66) note that a complement typically used in the metaphorical sense is *si* “to die” as in *lei-si* “to be tired to death”, *qi-si* “to anger to death” and *xia-si* “to frighten to death”. Both Chao (1968:446) and Li & Thompson (1981:65) find that some complements are even more aspectually functionalised as “phase complements” indicating the degree rather than the result of the preceding verb in the compound.

Li & Thompson (1981:55–56) identify four kinds of “results” expressed by RVCs:⁸⁷

- (i) *cause*, as in *da-po* “to break” and *la-kai* “to pull open”;
- (ii) *achievement*, as in *mai-dao* “manage to buy” and *xie-qingchu* “write clearly”;
- (iii) *direction*, as in *tiao-guoqu* “jump over” and *pao-chulai* “come running out”;
- (iv) *phase*, as in *yong-wan* “to use up” and *guan-diao* “to turn off”.

But rather than viewing these as different kinds of “results”, it would be more appropriate to call them different semantic relations between the constituents of compounds. Furthermore, Li & Thompson (1981) cannot explain the overlap of *achievement* and *phase*. For example, *mai-dao* “to manage to buy” as in *ta mai-dao-le na-ben zidian* “He managed to buy that dictionary” is considered as expressing *achievement* in one place (1981:55), but it should be referred to as a *phase* RVC based on their argument that *-dao* as a phase complement “can be vaguely described as ‘reach, succeed’ ” (*ibid*:66). In our book, therefore, we will divide RVCs into three types: *directional RVCs* (RVCD), *completive RVCs* (RVCC) and *result-state RVCs* (RVCS). Table 4.9 shows the distribution of the three types of RVCs in the Weekly corpus.

Table 4.9. Distribution of RVCs

Corpus	RVCC	RVCS	RVCD	Total
Training	33	780	740	1,553
Test	12	92	84	188
Total	45	872	824	1,741

Completive RVCs and result-state RVCs. As these terms suggest, completive RVCs indicate the completion while result-state RVCs denote the result-state of a situation. As a result-state only comes when an event is completed, completion is also implied by result-state RVCs. But these two types of RVCs have different focuses. While completive RVCs emphasise completion and imply resultant states, result-state RVCs focus on resultant states and imply completion (cf. Smith 1988:232; Zhang 1995:142). Consider the following pair:⁸⁸

- (93) a. **ta xi-le yifu*
 *he wash-ACTL clothes
 “He washed clothes”
- b. *ta xi-wan-le yifu* (RVCC)
 he wash-finish-ACTL clothes
 “He finished washing clothes”
- c. *ta xi-ganjing-le yifu* (Wu 2000:261) (RVCS)
 he wash-clean-ACTL clothes
 “He washed his clothes clean”

As noted in section 4.1.2, the situation conveyed by (93a) is atelic and therefore the actual *-le* only indicates termination here. When an RVC is used, the case is different, as shown in (93b) and (93c). Both (93b) and (93c) indicate the completion of the washing event. But even so, the focuses are different in the latter two sentences. The completive RVC *wan* “to finish” in (93b) indicates that the washing event is completed and only implies a result of a certain kind. While the completion of the washing event is focused on, its resultant state – whether the clothes are clean – is left unclear. In contrast, the result-state RVC *ganjing* “clean” in (93c) explicitly describes the resultant state of the washing event as the adjectival complement denotes. As a resultant state entails the completion of an event, completion is also implied by a result-state RVC.

Table 4.10. Completive complements identified by different authors

Authors	<i>zhao</i>	<i>dao</i>	<i>jian</i>	<i>wan</i>	<i>guo</i>	<i>zhu</i>	<i>hao</i>	<i>cheng</i>
Chao (1968)	+	+	+	+	+			
Li et al. (1981)	+	+		+		+	+	
Smith (1997)		+	+	+			+	+
Christensen (1994)	+	+		+	+		+	+
Liu et al. (1986)	+	+	+			+	+	+
Meng (1987)	+						+	+

Completive RVCs typically convey abstract aspectual meanings rather than the concrete lexical meanings of these complements (cf. Smith 1997:282; Zhang 1995:138). RVCs of this kind form a rather closed set which overlaps with the “phase RVCs” identified in the literature. Table 4.10 lists the most common completive RVCs.⁸⁹

But of these, only *wan*, *hao* and *guo* are truly completive RVCs, all of the others are in fact result-state RVCs. For example, *zhao* in *shui-zhao* “sleep-succeed” denotes the result of *shui* “sleep”; *dao* in *zhao-dao* “look for-succeed, find” also indicates the result of *zhao* “look for”. It should be noted, however, that *guo* can also be used as a directional RVC and a result-state RVC (cf. section 4.2.1). Similarly, *hao* can be used as a result-state RVC in addition to its function as a completive RVC. Compare the following pair:

- (94) a. *dao zhe-pian wenzhang xie-hao shi [...]*
 till this-CLF article write-finish when
 “By the time this article is finished [...]”
- b. *wo yiding yao ba wo de diyi bu dianshiju*
 I must want BA I GEN 1st CLF TV-play
pai-hao
 shoot-good
 “I must make my first TV play well”

The difference in the functions of *hao* in these sentences is obvious. In (94a), *hao* is a completive RVC indicating the completion of the writing event, whereas in (94b) it functions as a result-state RVC denoting the resultant state of the TV play making event.

Smith (1988:221, 1990:316) further divides completive RVCs into two subtypes. One is termed as “flexible completives” (like *wan*, *hao*, etc.) which indicate completion or termination in a telic situation type but only termina-

tion in an atelic situation type, the other is called “RVCs of strict completion” which mark completion and are only compatible with telic situations (e.g. *dao*, *zhao* and *cheng*, etc.).⁹⁰ However, upon examining her examples, we find that this argument does not hold. Smith (1988:222) uses **ta qu-dao Xianggang* “He went to Hong Kong” to prove the compatibility of a strict completive complement with a telic situation. Unfortunately, this example sounds rather odd to a native speaker.⁹¹ On the other hand, the atelic situations like *ta tui-le yi-liang che* “He pushed a cart” can take neither *wan* nor *hao* felicitously. The “flexible completive” complement Smith uses in her example *ta tui-lai-le yi-liang che* “He pushed a cart (in the direction of the speaker)” (Smith 1988:222) to prove the compatibility is *-lai*, which semantically belongs to the category of directional RVC (see section 4.4.1). Particularly confusing is that Smith further postulates the impact of RVCs on the changing of situation type. According to Smith (1988:233), completive RVCs tend to change situation type from activity (her “Atelic”) to achievement (her “Change of State”). For example, the completive complement *dao* changes the “Atelic” *wo zhao-le shoubiao* “I looked for my watch” into “Change of State” *wo zhaodao-le shoubiao* “I found my watch” (Smith 1988:234). However, this example contradicts her own assertion that strict completive *-dao* is absent from an atelic event (cf. also Zhang 1995:141). Smith’s differentiation between these subtypes is for the purpose of postulating the effect of completive RVCs on the shift of situation types, which, based on the above analysis, is unreliable. In our model, RVCs also contribute to situation aspect, but they do so at the nucleus level (cf. section 3.4.1). However, despite the deficiencies in her theory, there is no doubt that Smith has made a significant contribution to the study of aspect in Chinese. Her inclusion of RVCs in the treatment of aspect has certainly broadened our view and interpretation of aspect. The sense of completion, if it is not implicated by the actual *-le* (cf. section 4.1.2), is explicated by RVCs. For Smith, there is no completive viewpoint, her “Change of State” is a situation type.⁹² But it can be argued the completive aspect is a perfective viewpoint in parallel with the actual aspect.

As noted previously, while completive RVCs focus on completion, result-state RVCs imply completion by focusing on the resultant state. Result-state RVCs are basically adjectives.⁹³ In contrast with completive RVCs that are often extended or modified in meanings, result-state RVCs normally retain their lexical meanings. As Zhang (1995:144) notes, this term better identifies the property of adjectives as complements. If completive RVCs are defined as a

closed set, result-state RVCs form an open set as most adjectives can be used as complements (cf. also Tie 1986: 179).

A result-state RVC specifies the resultant state as a consequence of the action denoted by the preceding verb in a compound. Consider the following examples:

- (95) a. *jiang na suo-zhu de gongwenbao jian-kai*⁹⁴
 BA that lock-up GEN briefcase cut-open
 “(they) cut open the locked briefcase”
- b. *weile da-po tanpan de jiangju [...]*
 in-order-to hit-broken negotiation GEN deadlock
 “In order to break the deadlock in negotiation [...]”

In these examples, *jian-kai* “to cut open” and *da-po* “to break” are both resultative compounds with result-state RVCs. The adjectival complements *kai* “open” and *po* “broken” indicate the resultant states of the events *jian* “to cut” and *da* “to hit”, i.e. “the briefcase was open” in (95a) and “the deadlock was broken” in (95b). Since these resultant states logically follow completion of the events of *jian* “cut” and *da* “hit”, they reversely entail completion.

Directional RVCs.⁹⁵ Directional RVCs in Chinese form a closed class and a more or less cohesive unit. They may take the simple or compound form as shown in Table 4.11.

Table 4.11. Directional RVCs in Chinese

	<i>shang</i> (up)	<i>xia</i> (down)	<i>jin</i> (in)	<i>chu</i> (out)	<i>hui</i> (back)	<i>guo</i> (over)	<i>qi</i> (up)
<i>lai</i> (come)	<i>shanglai</i> come up	<i>xialai</i> come down	<i>jinlai</i> come in	<i>chulai</i> come out	<i>huilai</i> come back	<i>guolai</i> come over	<i>qilai</i> get up
<i>qu</i> (go)	<i>shangqu</i> go up	<i>xiaqu</i> go down	<i>jinqu</i> come in	<i>chuqu</i> go out	<i>huiqu</i> go back	<i>guoqu</i> go over	* <i>qiqu</i> ⁹⁶

Except for *-qilai* and *-xiaqu*, which have sometimes been recognised (notably Chao 1968) respectively as the *inceptive* and *continuative* aspect markers (see sections 5.3 and 5.4), the aspectual value of most directional RVCs is almost unknown.

It can be argued that directional RVCs have a function similar to that of

result-state RVCs in that they may also indicate a result-state by localising situations with spatial specifications and by indicating resultant states (cf. Zhang 1995: 147). With motion verbs, directional RVCs indicate the direction of an action; with non-motion verbs, they are used idiomatically to express aspectual meanings such as the result-state and completion/finality of an action (cf. also Henne et al. 1977: 176–177; Chen 1994: 64–70). For example, of the 740 occurrences of directional RVCs in the Weekly training corpus,⁹⁷ 383 instances indicate direction and the remaining 357 instances are aspectually related;⁹⁸ and in the test corpus, 42 out of 84 directional RVCs carry aspectual meanings. Consider the following examples:

- (96) a. *dajia yixia mingbai-guolai* [...]

everyone suddenly realise-over

“All of a sudden everyone realised that [...]”
- b. *chadian'er ba fuqin qi yun-guoqu*

nearly BA father angry faint-away

“He made his father so angry that he nearly fainted away”
- c. *ta huida-shanglai san-ge wenti* (Kang 1999)

he answer-up three-CLF question

“He succeeded in answering three questions”
- d. *ta na-pian lunwen xie-chulai-le* (*ibid*)

she that-CLF thesis write-out-le

“She has finished writing her thesis”

In these sentences, *mingbai* “to realise”, *yun* “to faint away”, *huida* “to answer” and *xie* “to write” are clearly non-motion verbs, thus directional RVCs *guolai*, *guoqu*, *shanglai* and *chulai* have nothing to do with the spatial dimension. In these contexts, while *guolai* and *guoqu* aspectually indicate a return to and a departure from the normal state, *shanglai* and *chulai* unmistakably indicate the success in achieving a result.

The aspectual function of directional RVCs is induced by their use as main verbs (cf. Zhang 1995: 146). As verbs, these complements all signify spatial directions related to a goal or a source. Directions may be relative to the spatial dimension (e.g. *shang/xia shan* “go up/down the hill” or to the speaker’s perspective or point of reference (e.g. *lai/qu Lndon* “come/go to London”). Whatever the case, the aspectual value of these directional RVCs can be interpreted in terms of the constituency of a situation in the temporal domain. For example, while *shang* “up” indicates the attainment of a goal (e.g. *dang-*

shang pingwei “become a judge (in contests)” or the completion of an action (e.g. *yu-shang gaoshou* “encounter a master hand”, *xia* “down” denotes the completeness (e.g. *mai-xia* “buy up”) or the finality of an action (e.g. *sheng-xia* “be left”, *li-xia gongxun* “perform immortal feats”).

From the discussion above, it can be seen that an RVC unmistakably indicates completion, irrespective of the RVC type. While completive RVCs emphasise completion and imply a resultant state, result-state and directional RVCs focus on the resultant state and imply completion. Because of the completive nature of RVCs, we agree with Klein et al. (2000:758) that “for all types of RVCs”, the result cannot be cancelled. However, we do not agree with Klein et al. when they state that “without *-le*, it is not asserted that any of the target phases is actually realised.” This assertion is in conflict with their analysis of the following examples.

- (97) a. *ta xi-ganjing yifu jiu zou-le* (ibid:765)
 he wash-clean clothes then leave-ACTL
 “He washed the clothes clean and then left”
 b. *ta xi-le yifu jiu zou-le* (ibid:766)
 he wash-CTL clothes then leave-CTL
 “He washed the clothes and then left”

If the assertion by Klein et al. is correct, the target phase of the washing event in (97a), namely, the *ganjing* “clean”, should not be realised and the sentence would sound odd. But in fact, it is as felicitous as (97b) where *-le* is used. In our analysis, (97a) is felicitous simply because RVCs mark the completive aspect which has the same function as *-le* to perfectivise a situation (see section 4.2.1 for a discussion of the interchangeability of *-le* and RVCs).

The completive aspect marked by RVCs is characterised by completiveness (section 4.4.3), holisticity (section 4.4.4) and dynamicity (section 4.4.5). These features will be explored after a brief discussion of the interaction between the completive aspect and situation types, which will be done in the following section.

4.4.2 The interaction between the completive aspect and situation types

RVCs are special in that they contribute to both situation aspect and viewpoint aspect (cf. Smith 1997). As noted in section 4.4.1, RVCs can be affixed to almost all verb classes other than achievement verbs. The resulting compound

verbs are all turned into derived achievements encoding a result (cf. section 3.4.1). In this sense, the completive aspect only interacts with the situation type of achievement.

4.4.3 The completiveness of RVCs

Expressing the aspectual meaning of completion by means of RVCs is a prominent feature of Mandarin Chinese (cf. Smith 1988:231; Zhang 1995:137). The completive aspect marked by RVCs constitutes an important part of the perfective viewpoints in Chinese (cf. Kang 1999:2; Christensen 1994). Smith (1988:231) regards RVCs as “part of the expression of the perfective viewpoint” indicating completion. Zhang (1995:149) also argues that “all complements have perfectivising functions” and “all complements signify completion with resultant situations.” The completive feature of RVCs is highlighted when compared with the actual *-le*. Consider the following minimal pair (Liu 1988:324):

- (98) a. *hao rongyi dang-le bing*⁹⁹
 very easy is-ACTL soldier
 “(He) finally became a soldier”
 b. *hao rongyi dang-wan bing*
 very easy is-finish soldier
 “(He) finally ended his soldier life”

As the translations show, while (98a) indicates the beginning of his being a soldier,¹⁰⁰ ending his soldier life is found in (98b), because *-le* focuses on actuality whereas RVCs indicate completiveness. Even though *-le* and RVCs can both indicate completion with a telic situation (cf. section 4.1.2), their focuses are different. For example (Kang 1999):

- (99) a. *ta huida-le san-ge wenti*
 he answer-ACTL three-CLF question
 “He answered three questions”
 b. *ta huida-wan-le san-ge wenti* (RVCC)
 he answer-finish-ACTL three-CLF question
 “He finished answering three questions”
 c. *ta huida-shanglai san-ge wenti* (RVCD)
 he answer-up three-CLF question
 “He succeeded in answered three questions”

- d. *ta huida-dui-le san-ge wenti* (RVCS)
 he answer-correct-CTL three-CLF question
 “He answered three questions correctly”

While these four sentences all convey the event “his answering questions” as completed, (99a) focuses on its actualisation, (99b) focuses on its completion, and (99c) and (99d) focus on its resultant state,¹⁰¹ i.e. his success in answering *three* questions (correctly), which implies that more than three questions were asked.

4.4.4 The holisticity of RVCs

RVCs are generally recognised as “perfectivising agents” in the literature (cf. Christensen 1994; Fang 1992; Kang 1999; Smith 1988, 1997; Zhang 1995). Like the other three perfective viewpoints in Chinese, a situation is also viewed from an external perspective when the completive aspect is applied. Therefore, the situation is presented as a non-decomposable whole. Consider the following examples:

- (100) a. *wo kan-wan zhe-pian xiaoshuo hou*
 I read-finish this-CLF story after
bian xiang [...] (RVCC)
 soon-afterward think
 “Having read this story, I thought that [...]”
- b. *bei jingfang dangchang ji-bi* (RVCS)
 PASS police on-the-spot shoot-dead
 “(he) was shot dead on the spot by the police”
- c. *zhongren zhui-dao hebian,*
 people chase-arrive riverside,
jiu-xia haizi (RVCD)
 rescue-down child
 “People chased him to the riverside and rescued the hostage child”

Examples in (100) take three types of RVCs respectively. *Wan* “to complete” in (100a) signals the completion of the reading event; *bi* “dead” in (100b) and *xia* “down” in (100c) both focus on resultant states while implying completion. No matter whether an event is durative or instantaneous, no differentiation is made here as to endpoints or duration because of the holistic feature of the completive aspect.

When the completive aspect is applied, even a segment of a “larger situation” is presented in its entirety. This feature is quite similar to that of the actual viewpoint (cf. section 4.1.5). Take (99c) for example: *ta huida-shanglai san-ge wenti* “He succeeded in answering three questions”. Even though it implies that more than three questions may have been answered, the three questions he answered successfully are regarded as a single whole, and his answering these three questions is presented as a non-decomposable event.

The holistic nature of the completive aspect is also evidenced by the incompatibility of RVCs with the durative *-zhe* and the progressive *zai*,¹⁰² both of which make explicit reference to the internal structure of a situation. Of the 1,553 RVCs in the Weekly training corpus and 84 RVCs in the test corpus, not a single instance co-occurs with the durative *-zhe*, though two instances were found to take the progressive *zai*.¹⁰³ However, as most examples in this section show, the completive aspect is clearly compatible with the actual *-le*. In this case, these two aspect markers hierarchically form a complex viewpoint: the *actual completive aspect*, which shares the features of both.

4.4.5 The dynamicity of RVCs

The dynamic feature of the completive aspect is closely related to the structure of an RVC compound, which typically takes an action verb as the preceding verb (V1) and another action verb or quality verb (i.e. adjective) as the complement (V2) (cf. Henne et al. 1977: 139–140),¹⁰⁴ as in *xie-wan* “to finish writing” and *chi-bao* “to have one’s fill”.

The completive aspect signals the completion of a situation. As completion involves a changing point, it is incompatible with ILS situations that are homogeneous and open-ended in nature.¹⁰⁵ Compare the attested example (101a) and its modifications (101b-c):

- (101) a. *mouxie guoren xiangxin-le mingyun*
 some countryman believe-CTL fate
 “Some countrymen believed in the fate”
 b. *mouxie guoren xiangxin-guo mingyun*
 some countryman believe-EXP fate
 “Some countrymen have once believed in the fate”
 c. **mouxie guoren xiangxin-wan mingyun*
 *some countryman believe-finish fate
 *“Some countrymen finished believing in the fate”

Compared with other completive RVCs, *wan* “to complete” is more flexible and can follow a large number of action verbs (cf. Henne et al. 1997: 182). Therefore it is singled out to represent completive RVCs. In these examples, *xiangxin mingyun* “to believe in the fate” is an ILS situation. While it can occur with the actual *-le* to indicate ingressive dynamicity (101a) and with the experiential *-guo* to indicate egressive dynamicity (101b) (cf. sections 4.1.6 and 4.2.5), it cannot take the completive RVC *wan* (101c). The contrast seems to suggest that the completive aspect is “more dynamic” than the actual aspect and the experiential aspect.

As noted above, result-state and directional RVCs focus on the resultant state and imply the completion of an event. When the completive aspect is marked by these two types of RVCs, is this viewpoint still characterised by dynamicity? The answer is yes, because result-state and directional RVCs still imply completion just as completive RVCs do when their focus shifts to a resultant state.¹⁰⁶ Consider the following examples:

- (102) a. *Yang Bingming yong gangju jiang jiaoliao*
 Yang Bingming use steel-saw BA fetter
ju-duan (RVCS)
 saw-broken
 “Yang Bingming broke the fetters with a saw blade”
- b. *dangshi tamen yao wo de che*
 at-that-time they ask I GEN car
ting-xialai (RVCD)
 stop-down
 “At that time they asked me to stop my car”

The result-state complement *duan* “broken” (102a) and the directional RVC *xialai* “down” (102b) both focus on resultant states, i.e. “the fetters were broken” (102a), and “the car was stopped” (102b). If RVCs only convey such stative situations, one might as well say that the completive aspect marked by these two types of RVCs is characterised by stativity. But in fact, result-state and directional RVCs relate these resultant states to their preceding events. That is, resultant states are *event-induced*. Such a relation can be illustrated by Moens’ (1987: 64–65) notion of event nucleus in a modified way (see Figure 4.11).

In the figure, the obliques stand for a preceding event, the verticals for its resultant state, and the symbol “◊” signals the completion of the preceding

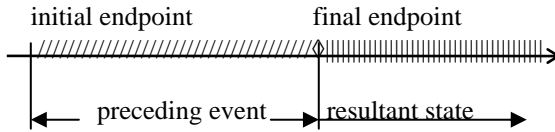


Figure 4.11. Event-induced resultant state

event and the beginning of the resultant state. From the figure we can see that an event-induced resultant state involves a changing point, i.e. it is brought about by the completion of its preceding event. As noted in section 3.4.1, RVCs encode both the process and the result. The dynamicity of the completive aspect is embodied in the causal relationship between the process and the resultant state.

Chinese is a language with a rich inventory of aspect markers. Four perfective viewpoints were identified on the basis of our corpus data – the actual aspect marked by *-le*, the experiential aspect marked by *-guo*, the delimitative aspect marked by verb reduplication and the completive aspect marked by RVCs. While these four viewpoints all present situations perfectly, they have different focuses. Specifically, *-le* focuses on the actuality of a situation, *-guo* on its experientiality, verb reduplication on its delimitativeness and RVCs on its completiveness. These viewpoints also interact with situation aspect in different ways. In chapter 5, we will explore the imperfective aspects in Chinese to complete the picture of viewpoint aspect in this language.

Notes

1. The actual *-le* and the COS (change of state) *le* are transliterated with and without a hyphen, respectively, in order to differentiate them. The capitalised *LE* refers to “*-le* and/or *le*”.
2. These two morphemes have also been referred to in the literature respectively as the suffix *-le* and the particle *le* (Chao 1968), as “the verbal suffix *-le*” and “the sentence particle *le*” (Comrie 1976:81f), as “the verb-final *-le*” and “the sentence-final *le*” (Li & Thompson 1981), or as “the perfective *-le*” and “the inchoative *le*” (Chan 1980:47–61; Christensen 1994).
3. Zhang (1995:218) regards *LE* as a unified perfective marker. But it is clear that not all the functions of the sentential *le* can be fitted under the label of perfective.
4. Still, this explanation is inadequate. In our analysis, it is necessary to differentiate between the RVC *guo* that indicates completiveness and the aspect marker *-guo* that

signals experientiality. The morpheme *guo* in (1a) is a completive RVC indicating completion, and thus is interchangeable with *-le* that indicates the actualisation of a situation. It is clearly different from the experiential *-guo* as in *wo chi-guo Riben fan* ‘I’ve eaten Japanese food (before)’. See section 4.2 for an explanation for the interchangeability of *guo* and *-le*.

5. Indeed, the actual *-le* can also occur in the sentence-final position after a transitive verb when the object is deleted, topicalised, or made the object of a *ba* construction. The COS *le* may not necessarily appear in the sentence-final position because it precedes a modal particle such as *a*, *ba*, *ma* and *ne*.

6. *Current* should be interpreted in relation to the *reference time* rather than the *speech time* (see section 4.1.4)

7. In the Weekly corpus, the actual *-le* was tagged as *ACTL*, the COS *le* as *COS*, and the double-role *LE* as *DBL*.

8. According to Chao (1968), in certain dialects such as Cantonese and the Wu dialects, there are separate morphemes to indicate actuality and COS meanings which can co-occur continuously. Haplogy of *-le le* only occurs in Mandarin Chinese (i.e. *putonghua* ‘the common language’).

9. Comrie appears to assume that any *LE* that follows a predicate immediately is the actual *-le*. This is clearly not true. For instance, in his examples *dongxi gui le* ‘Things are expensive’, and *ta bu deng le* ‘He is no longer waiting’, the morpheme is clearly a COS *le*, which he assumes to be ‘the verbal particle *-le*’ (1976:58).

10. This distinction is observed by many researchers, e.g. Li & Thompson (1981) and Wu (2000), who argue that since *mei(you)* already combines negation and perfectivity in one morpheme, *-le* would be redundant (cf. also Wang 1965:458).

11. Christensen (1994), in the narrative discourses of written Chinese (totalling 3,369 Chinese characters) produced by his 10 informants based on a descriptive 7-minute film, finds 75 instances of the actual *-le* and 11 occurrences of the COS *le*, registering a ratio of 6.818 (see Table 4.1).

12. Chao (1968), Henne et al. (1977) and Li & Thompson (1981) discuss the semantic functions of the inchoative *le* in a separate part on particles.

13. There are two possibilities for the sentence-final *le*. One is the COS marker, the other is the modal particle indicating speaker attitude. Only the former will be discussed here as the latter is beyond the scope of this study. For a full discussion of the functions of sentential or particle *le*, see Chao (1968) and Li & Thompson (1981).

14. Li, Thompson & Thompson (1982:40–41) strongly argue that the particle *le* should be considered as an aspect marker of the perfect in Chinese.

15. Tjee (1986:96) is perhaps confused as to whether the ‘verb suffix’ *-le* signals completion or termination, as he claims on the one hand that *-le* as in *ta chang-le Zhongguo ge* ‘He sang a Chinese song’ specifies that the event of singing a Chinese song is now being viewed at its completion, while on the other hand, he notes that *-le* indicates that an action is in the state of ‘completion or termination’. Because of the confusion, he further argues that this suffix functions to signify an action or event that has *taken place* prior to the

moment of speech. The wording of “take place”, which focuses on the actualisation or realisation of an event rather than its completiveness, is better than the other two.

16. Translated from Dai’s (1997:21) quotation of Lü (1961) “The current task for researchers of Mandarin Chinese”.

17. Chu (1976), in his study of action verbs, also finds that the structure of *action verb* + *-le* only indicates the *active attempt* and *actual performance* rather than the *attainment of goal*, while the structure of *action verb*+ *RVC* indicates all of the three.

18. While Bybee, Perkins & Pagliuca (1994:54) draw an explicit distinction between “completive” and “perfective”, the authors also seem to suggest a positive correlation between situation type and closure type. Thus situations like *shoot someone dead* and *eat up* denote completed actions.

19. Our explanation is supported by Li & Thompson (1981), who observe that the meaning of completion often comes from the meaning of the verb with which *-le* occurs. Klein et al. (2000:724) is clearly conflating a final temporal endpoint and a final spatial endpoint (see section 3.2.5) when they argue that “when the verb encodes a situation with a clear temporal boundary”, *-le* indicates that a situation is completed. Their invented example for a [–bounded] situation, namely, **xiao yazi you-le yong* ‘The duckling swam’, is also infelicitous as it stands. The sentence is at best incomplete and can only serve as a subordinate clause, as in *xiao yazi you-le yong hou...* “After it swam, the duckling...”

20. This occurs because Chinese has no articles.

21. But regrettably, even this claim is denied later by herself: “But in Chinese perfectives termination and completion are expressed separately for all situation types” (Smith 1997: 73), which is in turn contradicted by her own assertion that accomplishments may be either terminated or completed with simple perfective viewpoint (Smith 1997:264).

22. These three examples are cited from (Smith 1988). But the English translations of (9a) and (9c) are modified, because in (9a), according to Tai (1984:290–291), *xue* and *xue-hui* in Chinese can find equivalents in English: “study” for *xue* and “learn” for *xue-hui*. While *xue* and “study” are atelic, *xue-hui* and “learn” are telic. In (9c), the same applies: while *zhao* and “look for” are atelic, *zhao-dao* and “find” are telic. The distinction between *xue* “study” and *xue-hui* “learn” also explains the puzzle of Klein et al. (2000:757) why *xue Fawen* ‘study French’ in combination with *-le* “does not lead to a completion reading.”

23. Again, these two translations are both possible because Chinese has no article.

24. Similar views can be found in Garey (1957:106–108), Comrie (1976:46), Brinton (1988:43) and Kang (1999:62). Pan (1993) also observes that “different situation types influence the interpretation of perfective”; with an accomplishment, *-le* indicates that the event started and *finished* later; with an activity, *-le* indicates that it started and *terminated* later.

25. Smith (1988, 1991, 1997) argues that the perfective viewpoint is not available to states in Chinese, which, according to our data, is not true (cf. section 4.1.3).

26. The English example *John loved Mary* shows that perfectives (the simple past in this case) can interact with stative situations perfectly well, though the actual viewpoint cannot

interact with statives as freely as with other situation types, as will be seen later in this section. Leech (1971:9) notes that everything the simple past refers to, be it dynamic or stative, “is in a sense an ‘event’, an episode seen as a total entity.”

27. Although Li (1999) also uses the term *bounded*, she actually intends the term to mean *telic*, because in her model, *boundedness* actually refers to “the natural final point signalling change of state.”

28. Li (1999) does not differentiate between achievements and semelfactives, nor is she aware of the distinction between SLSs and ILSs. Therefore, her model cannot account for why the progressive *zai* can co-occur with “achievements” as in *youren zai qiao men* “Someone is knocking at the door” or with states, as in *ta zhe ji tian zai shengbing* “He is ill these days”.

29. Li & Thompson (1981:185–202) propose a list of factors which make a situation bounded and argue that only when a situation is bounded temporally, spatially or conceptually can the actual *-le* be added.

30. The suffix *-qilai* is an imperfective aspect marker indicating inceptiveness (see section 5.3).

31. Actualisation as proposed here is somewhat similar to the presupposition of the “actual performance” in Chu’s (1976) discussion of action verbs. But the difference is also quite clear. While Chu (1976) discusses action verbs at the lexical level, we are speaking of situations at the sentence level; Spanos (1977, 1979) also relates the notion of “realisation” to the semantic category indexed by *LE*, but he does not differentiate between these two morphemes.

32. It should be noted that while (34a) and (34b) are diagrammed with ET preceding RT, the two may actually overlap (i.e. $ET \leq RT$).

33. The actual aspect marker *-le* can be omitted for discursal reason (cf. section 5.5).

34. When an event takes a perfective viewpoint, it is viewed in its entirety, because the perfective viewpoints have “the effect of reducing it to a single point” (cf. Comrie 1976: 18). Therefore, the event time (ET), irrespective of the objective complexity of the internal structure of a situation, is illustrated as a temporal point in the figure. Zhang (1995: 123) also notes that “if two situations take place in sequence, the first is often terminated by *-le* in order to show succession.”

35. The delimitative aspect signalled by verb reduplication, as Dai (1997:163n) notes, seems to be more descriptive than narrative though.

36. As Siewierska (1991:117) observes, reference can be either an interval or a temporal point.

37. *Action vs. purpose* is only one of the relations indicated by these sequential events. For a detailed discussion of these structures, see the relevant sections in Chao (1968) and Li & Thompson (1981).

38. One might use counter examples like *ni bu ai ting, keyi guan-le shouyinji* “If you do not want to listen, you can turn the radio off” to argue that even without a posterior RT, *-le* can occur in a future event. Be aware, however, that *LE* in sentences like this is an RVC equivalent to *diao* indicating detachment rather than an aspect marker. Lü (1980) and

Sybesma (1999) note that the verbal suffix *LE* following some verbs may not necessarily indicate actuality. Lü (1980) identifies 28 such verbs: *wang* “forget”, *diu* “throw, get rid of”, *guan* “close; turn off”, *he* “drink”, *chi* “eat”, *yan* “swallow”, *tun* “swallow”, *po* “splash”, *sa* “spill”, *reng* “throw, get rid of”, *fang* “release, set free”, *tu* “scribble”, *mo* “wipe”, *ca* “wipe”, *peng* “bump”, *za* “break”, *shuai* “throw”, *ke* “crack”, *zhuang* “hit”, *cai* “step on”, *shang* “injure”, *sha* “kill”, *zai* “slaughter”, *qie* “cut”, *chong* “flush”, *mai* “sell”, *huan* “return” and *hui* “destroy”. In these cases, *LE* is interchangeable with the RVC *diao*. This is probably because the actual *-le* itself developed from an RVC (cf. Wu 2000).

39. Dai (1997:53) argues that the RTs for situations actualised with respect to the past and future references are both ST, that’s why he cannot draw a clear distinction between these two kinds of situations in his discussion.

40. An RT can be provided either by a posterior event or by a time word.

41. The ET/RT distinction is also drawn in Comrie (1985:79). ET is the “specific point or period of time at which a situation is located”, while RT is the “reference point” in Comrie’s terms.

42. Smith (1983:484) also notes that “the progressive indicates a time that is neither initial nor final: if a time is to be available for the progressive, it may not be an endpoint time.”

43. As Kang (1999:8) notes, it spans a stage (3 days in this case) after the final endpoint of a situation (i.e. his leaving).

44. In this way, a stative situation is presented as a dynamic one with “an implication of change from a different previous condition” (Chao 1968:669).

45. Comrie (1976:19–20) notes that in many languages, including Chinese, the perfective forms of some stative verbs can be used to indicate the beginning of a situation (ingressive meaning). Siewierska (1991:119) also gives a Polish example to prove that an open-ended nondynamic SoA, i.e. a state, when viewed perfectly, can be assigned an ingressive reading.

46. The example given by Li & Thompson (1981:272) is *ta tai zisi le!* “He is too selfish!”, in which the sentence-final *le* is undoubtedly a modal or attitudinal particle indicating speaker attitude.

47. *China Encyclopaedia-Volume of Language & Writing* describes the function of the modal particle *le* as indicating the coming about of a new situation. Such a treatment has clearly missed the point, since “the coming about of a new situation” has nothing to do with the speaker’s mood, but only has an aspectual meaning.

48. According to *China Encyclopaedia-Volume of Language & Writing*, *la* is sometimes considered as the merged form of *le* and *a* (cf. also Li & Thompson 1981:317n).

49. The three grammars are Chao (1968), Liu et al. (1986), and Li & Thompson (1981).

50. It should be noted that *current* does not necessarily refer to the speech time ST, but rather to the reference time RT. Zhang (2000) fails to realise the CRS meaning denoted by the COS *le* because she identifies “current” with ST. Henne et al (1977:113) also incorrectly relate the relevance of a situation to “the moment of speaking.”

51. Li & Thompson (1981:317n) criticise “most grammarians” for only taking into account the change-of-state meaning of *le* but ignoring its other four functions as identified by them (cf. *ibid*:244). But we shall argue in favour of “most grammarians” that the other functions overlap with each other and are actually the extensions of the change-of-state meaning on the pragmatic basis, as can be seen from the examples given therein. Furthermore, their analyses of some examples are inconsistent with other grammars. For instance, in the sentence *wo zuotian dao Zhang jia chifan le* “I went to the Zhang’s for dinner yesterday”, Li & Thompson (1981:271) regard *le* as indicating “progress so far”, but Chao (1968:798) analyses it as indicating “isolated event in the past”, which Smith (1997:296n) argues “may refer to the perfective, post-verbal morpheme *-le*.”
52. The first two events are covertly marked by taking the zero form (see section 5.5).
53. Li, Thompson and Thompson (1982) even consider *le* to be a manifestation of the perfect in Mandarin Chinese. Zhang’s (2000) claim that the actual *-le* in Chinese encodes the perfect aspect is clearly misleading.
54. On this point we disagree with Christensen (1994) who maintains that the perfect aspect is clear in sentences containing only the COS *le* (or the ‘inchoative *le*’ in his own term).
55. According to Li & Thompson (1981:283), *le* in this case functions as a mark of *finality* that completes a sentence just like a sentence-final punctuation mark.
56. Kong (1994) accounts for the unacceptability of (64a) from the viewpoint of information theory. Because a frequent event like *chifan* “eat meal/food” conveys little information, the hearer would deem such an event to provide the RT for another event conveying more information, therefore the sentence as it stands is incomplete and must be followed by another clause. In contrast, an infrequent event like *ta chi-le duyao* “He took poison” is acceptable because of the large amount of information conveyed. Likewise, when a frequent event takes a quantity NP, as in (64b), it also conveys major information and thus is acceptable. This approach is interesting, but it is inadequate to explain why the COS *le* as an “empty word” can also make the sentence acceptable.
57. In this context, *le* interacts with *fanzui* “to commit a crime” rather than *zhidao* “to know”, because this sentence should be interpreted as *ta fanzui le. ni zhidao ma?* “He has committed a crime. Do you know?”, but not **ta fanzui. ni zhidao le ma?* “He committed a crime. Have you known?”
58. Shi (1992) argues that the viewpoint marked by *-guo* is the “completive aspect” signalling “the completion of an action”, which is clearly not the case. On the one hand, the experiential aspect marked by *-guo* denotes an experienced situation, while the completive aspect is marked by RVCs, as argued in section 4.4; on the other hand, *-guo* does not necessarily signal “the completion of an action”, e.g. the action of eating in *ta chi-guo na-wan fan* “He ate a bit of rice in that bowl” is obviously not completed.
59. An RVC construction demonstrates what 2-phase contents are. In *da-po* “hit-broken”, for example, *da* “hit” is the source phase and *po* “broken” is the target phase. According to the authors quoted above, Chinese focuses on the target phase whereas English focuses on the source phase.

60. To make a distinction between the two forms of *GUO*, the aspect marker is written as *-guo* while the RVC and DC (directional complement) are written as *guo*. The capitalised *GUO* refers to either.
61. Chao (1968:251, 450) treats *guo* in (68e) as a directional complement. We argue that *guo* in this case is an RVC, because even the extended usage of a directional complement only denotes temporal forwardness. Only at the stage of RVC on the evolution chain did *guo* acquire the meaning of completiveness. *Guo* as used in this way is sometimes referred to as *anterior guo* in contrast to the experiential *-guo* (e.g. Yang 1995).
62. A similar account of the evolution of the marker *-guo* can be found in Li & Shi (1997), according to whom aspect markers like *-le*, *-zhe* and *-guo* are all derived from verb complements, which evolved from full verbs at earlier stages. For instance, *GUO* emerged as a full verb in the 4th century, began to be used as a verb complement in the Tang Dynasty (618–907) and was generalised as an aspect marker in the Yuan Dynasty (1271–1368).
63. Unlike the full verb *guo*, which has the 4th tone (high falling tone), *-guo* as an aspect marker is pronounced with a neutral tone (i.e. toneless) while the DC *guo* and RVC *guo* carry a optional 4th tone.
64. In addition to the uses mentioned, *guo* has many other meanings, as in *guo(fen/du)* “excessively, too”, *guo(cuo)* “fault”, or as a bounded morpheme to form such words as *guocheng* “process”, *tongguo* “pass through; by means of” and *jingguo* “as a result; process; go through”.
65. When *guo* follows a non-motion verb which is not expected to take a directional complement, the DC *guo* is extended in the temporal dimension to indicate the passing of time.
66. Comrie (1976:59f) also notes that in addition to the experiential *-guo*, there is also a “suffix” *guo*, with the 4th tone, indicating the completion of an action.
67. Henne et al. (1977:130) also note that *guo* in their example *ni chi-guo-le liyu meiyou* “Have you finished your carp?” is a complement denoting completion. But their argument is based on the assumption that “there cannot be two consecutive suffixes.” While we agree to their conclusion, we don’t agree to the basis for their argument. As will be discussed in sections 4.3.1, 4.4.4, 5.2.1, 5.3.2, 5.3.5 and 5.4.2, some aspect markers do occur together to signal a ‘complex viewpoint’.
68. This group of examples is cited from Zhang (1995) in a modified form.
69. The pair of examples in Dai (1997) is *xiao shihou, wo zai zhe'er zhu-le san nian* vs. *xiao shihou, wo zai zhe'er zhu-guo san nian*, both can be glossed as “I lived here for three years when I was a little boy”.
70. There are 17 instances of such co-occurrence out of 75 situations taking *-guo* in the training corpus and three instances in the test corpus.
71. Zhang (1995:128) argues that *ta si-guo* is possible, though unusual, in a highly marked situation where somebody had a bad accident and was badly injured. After having survived, this person may say: *wo si-guo yi-ci* “I have died once”. But in this interpretation, *si* “to die” is clearly a metaphor. Klein et al. (2000:760–761) correctly observe that in *Zhangsan da-si-guo yi-ge ren* “Zhangsan once killed a person”, *-guo* applies to the patient a

person instead of the agent *Zhangsan*. In *cun-li si-guo san-ge ren* (village-in die-EXP three-CLF person), which means “at some time, the village had the property of having three people who died”, *si* “to die” relates to what happened to the village. The sentence is quite unlikely to mean “in this village, three people have once been dead”.

72. It may be argued that *biye* “to graduate” can be repeatable, for example, to graduate with a bachelor degree and then with a master degree. But with the same degree, one can only graduate once, and in this sense, *biye* is nonrepeatable.

73. Verb reduplication in different languages may carry different aspectual meanings. For example, in the Micronesian language, *kak* means “bounce once”, with *kakkak* meaning “bounce more than once, continuously” and *kakkakkak* meaning “keep bouncing” while in the Penutian language Wikchamni, reduplication of a verb stem indicates durativity (see Dahl 1999:32, 35).

74. Reduplication of other parts of speech (like *ren-ren* “everyone” and *gaogao-xingxing* “happy-happy”) or phrases (like *xiang-zhe xiang-zhe* “thinking-thinking”, *xiang-le you xiang* “think and think again”) are beyond the scope of this book.

75. The format of AA includes either monosyllabic verbs (e.g. *zou-zou* “walk a bit”) or disyllabic verbs (*taolun-taolun* “discuss a bit”). While most monosyllabic verbs can be reduplicated, the ability of disyllabic verbs to reduplicate is more limited. Of the 579 monosyllabic verbs included in *Dongci yongfa cidian* “A dictionary of verbal usage”, 432 (taking up 74.6%) can be reduplicated while only 247 out of 685 disyllabic verbs (36.2%) can be reduplicated (cf. Dai 1997:74)

76. The authors incorrectly claim that *A -le A* is ungrammatical. We think that their example *ta shui-le shui* “He slept a little” is totally grammatical (cf. also Dai 1997:166). One further example illustrates: *ta kan-le kan shoubiao shuo [...]* “He took a look at his watch and said [...]”.

77. The “verb+object” type disyllabic verbs are reduplicated in the form of *AAB* as in *kan-kan shu* “read-read book”. But as only the verb part is reduplicated, we might as well say verbs of this type take the form of *AA*.

78. The fact that *A yi A* only applies to monosyllabic verbs but not disyllabic verbs (**taolun-yi-taolun* “discuss-one-discuss”) also argues against this format as the form of verb reduplication.

79. Shao (1996) also argues that *A yi A* can be replaced by *A yi xia*.

80. Reduplication of nonvolitional verbs can only convey the delimitative but not the tentative meaning.

81. A tentative reading is only possible for a future event as tentativeness is irrelevant to the past or present.

82. It should be noted, however, that reduplicated verbs can take time words indicating *temporal point* as an adverbial modifier, because complemental and adverbial modifiers differ in nature: while an adverbial locates a situation temporally, a complement denotes the duration of a situation. Compare the following pair: *ta shangwu da-le qiu* “He played the ball in the morning” (time word as an adverbial) vs. *ta da-le yi shangwu qiu* “He spent the whole morning playing the ball” (time word as a complement).

83. As noted above, stative verbs are normally not reduplicated, though some SLS verbs have the feature of [+dynamic] (cf. section 3.3.3) and thus can be reduplicated.
84. Wu (2000) shows good evidence that RVCs signal the completive aspect. It should be noted, however, that in Wu (*ibid*), RVCs are markers of situation aspect, whereas as argued in this book, the completive aspect is one of the perfective viewpoints in Chinese, though RVCs contribute to both situation aspect and viewpoint aspect.
85. The term RVCs is used in this book as a cover term including both resultative verb complements and directional complements. The term adopted here is consistent with Smith (1988:232), Li & Thompson (1981:55, 58) and Christensen (1994), but it is different from the term adopted by Tiee (1986:175) and Zhang (1995:137), both of whom treat directional complements as a category separate from resultative verb complements.
86. As noted by Zhang (1995:138), while most adjectives can serve as verb complements, the number of verbs functioning as complements is much more limited.
87. Lu (1977:278) also argues that there are four types of verb complements: result, direction, achievement and completion. But it can be argued that achievement is also a kind of result, so these two can be merged.
88. The more natural way to express the idea in this pair is using the *ba*-construction: *ta ba yifu xi(wan/ganjing)-le* (see section 3.4.3; cf. Wu:2000). But the change in the structure means that all of these sentences present the situation as completed, because the object preposed with *ba* always denotes a definite and specific thing or person (cf. Tiee 1986:285), thus making the situation [+telic] and [+result] (cf. section 3.4.3).
89. The list only shows the completive complements that appear in at least two works cited in the table. *Zhu* (“fixed”) is treated as a result-state RVC, and *guo* as a directional RVC by Smith (1997). *Zhu* is treated as a directional complement in Chao (1968:464). In addition to the listed complements, a few others are also possible: *liao* “finish” (Chao 1968), *dong* “moved” and *zou* “away, off” (Tiee 1986:177) as well as *diao* “away” (Liu et al. 1986).
90. The same approach is adopted by Christensen (1994).
91. Several other examples in Smith (1988) are also found intuitively unacceptable: (38a) on p.233, (iva) on p.238, (vb) and (via) on p.239.
92. While Smith (1997) is also aware of the contribution of RVCs to both situation aspect and viewpoint aspect, she fails to identify the aspect marked by RVCs as an independent aspectual viewpoint.
93. For a list of common result-state complements, see Chao (1968:444–446).
94. *Jiang* is used here in a similar way to *ba* as a preposition to prepose the object before the verb.
95. Directional RVCs are a much-studied topic, though their aspectual value has largely been overlooked until recently. A directional RVC has also been referred to as “directional compound complement” (Chao 1968), “directional suffix” (Thompson 1973), and “directional complement” (Tiee 1986). Although this book is not concerned with a detailed study of directional RVCs, it should be pointed out that one point in Tiee (1986:187) is misleading: Tiee takes it for granted that *ta na-lai-le na-ben shu* “He brought that book”

and *ta na nei-ben shu lai-le* “He came to fetch that book” mean the same thing. We argue that these two sentences mean differently, as shown in our translations. This book will only discuss the aspectual value of directional RVCs.

96. The combination **qiqu* is rare if acceptable at all in Mandarin Chinese. Chao (1968: 463) mentions *na qiqu* “Take (it) away” in the Nanjing dialect. Li & Thompson (1981: 61) claim that there are 16 compound complements, but clearly the authors have not checked the validity of some combinations, i.e. **qiqu* and **kaiqu*.

97. This figure does not include seven instances of *-xiaqu* marking the *continuative* aspect and 18 instances of *-qilai* and *-qi* which indicate *inceptiveness* (see section 5.3).

98. Except *jin*, *jinlai*, *jinqu*, *hui*, *huilai*, and *huiqu*, all other directional RVCs may denote resultative meanings.

99. The expression *hao rongyi* “very easy” may sometimes, as in (98), mean just the opposite of its literal meaning, i.e. “it takes great efforts” instead of “it is very easy”.

100. The actual *-le* interacting with unbounded ILSs demonstrates ingressive dynamicity (cf. section 4.1.3).

101. Zhang (1995: 121) also notes that in *xiaomei bu xiaoxin da-le yi-ge beizi* and *xiaomei bu xiaoxin da-po yi-ge beizi* (both can be glossed as “My little sister broke a cup carelessly”), while *da-po* explicitly describes the resultant state of a cup being broken, this information is implicit with *da-le*.

102. But this assertion does not exclude the possibility of co-occurrence of *zai* with directional RVCs when they indicate the direction of motion verbs, or with result-state RVCs in which the events conveyed by the preceding verbs are durative (see section 5.2.2).

103. One is a directional RVC found in the training corpus, the other is a result-state RVC found in the test corpus.

104. Some SLS verbs indicating strong sense of actionality, though, can also appear in the V1 position (e.g. *bing-dao* “be down with an illness”, *qi-huai* “be beside oneself with rage”). But ILS verbs are not supposed to take verb complements (e.g. **zhidao-wan* “finish knowing”).

105. SLSs, on the other hand, can take the completive aspect because they are potentially dynamic and less permanent (cf. section 3.3.3).

106. The dynamicity of RVCs is more obvious when directional RVCs indicate the direction of motion verbs.

CHAPTER 5

The imperfective aspects in Chinese

Having discussed the perfective aspects, we will move on in this chapter to explore imperfective viewpoints in Chinese. When a situation is presented imperfectively from an internal viewpoint, the focus may be on the initial endpoint, the medial part or a continuative stage following an internal point. In all of these cases, a situation is decomposed into several segments and only part of the situation is focused on. Figure (5.1) is an overview of imperfective viewpoints in Chinese.

In the figure, t_1 stands for the initial endpoint of a situation, t_4 for its final endpoint while t_2 is an indefinite point (observation point) between t_1 and t_4 ($t_1 < t_2 < t_4$), t_3 is a definite point (resumptive point) between t_1 and t_4 ($t_1 < t_3 < t_4$). If the situation is presented with the inceptive viewpoint marked by *-qilai* (see section 5.3), the focus falls on t_1 and the part that follows it; if it is presented with the durative aspect marked by *-zhe* (see section 5.1) or the progressive aspect marked by *zai* (see section 5.2), the focus is on t_2 and the parts preceding and following it (as indicated by the double arrow); with the continuative viewpoint marked by *-xiaqu* (see section 5.4), the resumptive point t_3 (a definite internal point) and the part that follows it are in focus (as indicated by the unidirectional arrow). It should be noted that in all of these cases, the final spatial endpoint t_4 is excluded. There is no terminative aspect in Chinese (cf. Dai 1997:80), because its role is taken by the completive aspect marked by RVCs which views a situation perfectly (cf. section 4.4). In this chapter, we will also discuss the ‘zero aspect’, i.e. sentences that convey aspectual meanings but do not take any overt aspect marker (section 5.5).

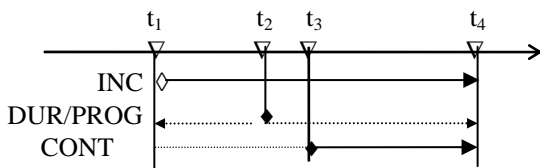


Figure 5.1. Imperfective viewpoints in Chinese

5.1. The durative aspect: *-zhe*

As with the actual *-le*, *-zhe* as an aspect marker has been studied intensively. While there is a unanimous agreement upon its imperfectivity, there is controversy over the aspectual meaning conveyed by this marker.¹ It has often been referred to as the “progressive suffix” indicating a “progressive action” (Chao 1968:248; Comrie 1976:88; Tiee 1986:93) or the “continuous aspect” marker (Li & Cheng 1988) indicating the “continuation” of a situation (Zhang 1995:134). Some scholars (e.g. Li & Thompson 1981:217; Henne et al. 1977:125; Dai 1997:80) emphasise the durative feature of the situation marked by *-zhe* and refer to this viewpoint as the durative aspect. Some others argue that *-zhe* indicates “a state or condition which is the remaining result of the action indicated by the verb” (Smith 1997:126) and refer to *-zhe* as the marker for the “resultative aspect” (e.g. Smith 1997; Yeh 1991; Pan 1998).

It is argued in this book that *-zhe* typically signals the durative aspect. But the term used here is different from Li & Thompson (1981), because the authors conflate *-zhe* and *zai* and treat both, without differentiation, as the durative aspect markers. This is clearly inadequate (see section 5.2.1). Our term also differs from Henne et al. (1977), who treat *zai* as an adverb indicating duration, or Dai (1997) who totally overlooks the aspectual value of *zai*. In our model, *-zhe* is considered as the marker for the durative viewpoint aspect indicating the durative nature of a situation.

5.1.1 The major functions of *-zhe*

As a durative aspect marker, *-zhe* is used mainly to signal the durative nature of a situation.² Specifically, *-zhe* has three basic functions:

- (i) to occur with a verb or adjective to indicate the durativity of a continued dynamic or static situation;
- (ii) to serve with a verb as an adverbial modifier (i.e. the V_1 -*zhe* V_2 structure) to express overlapping actions and provide background information;
- (iii) to occur in locative inversion and indicate existential status.

Durativity. To signal durativity is the canonical function of *-zhe* (cf. section 5.1.3). This means that [+durative] situations are compatible with *-zhe*.

[–Durative] situations either cannot take *-zhe* felicitously (i.e. achievements) or are forced to take an iterative reading (i.e. semelfactives). The two situations described in (1) are both durative, with *-zhe* focusing on their duration and continuation.

- (1) a. “9-*hao gongcheng*” *jian-cheng* 20 *duo nian lai*,
 No. 9 project build-complete 20 more year since,
yizhi kongxian-zhe (stative)
 always idle-DUR
 “No. 9 project has been idle for more than 20 years ever since its completion”
- b. *ta zheng pansuan-zhe tuoshen zhi ji* (dynamic)
 he right-now think-DUR escape GEN plan
 “He was thinking of a plan to escape”

The V₁-zhe V₂ structure. The durative aspect marker *-zhe* can be used in the V₁-*zhe* V₂ structure to express overlapping actions and provide background information when it occurs with a verb. For example:

- (2) a. *na haizi ku-zhe yao baba*
 that child cry-DUR want dad
 “While crying, that child called out for her father”
- b. *chi-zhe chi-zhe fan mengli jiangfanzhuo yi xian*
 eat-DUR eat-DUR meal violently BA table one lift
 “(He) ate and ate and suddenly turned the table over violently”
- c. *shuo-zhe bian tao-chu yi-ge yaoping*
 say-DUR then take-out one-CLF medicine-bottle
 “Having said that, (the *qigong* master) took out a medicine bottle”

The construction V₁-*zhe* V₂ indicates that the action expressed by V₁, which overlaps with the action denoted by V₂, is in the background. The structure of repeated V-*zhe* also functions to indicate an accompanying situation: while one action is in progress the occurrence of another is expected (e.g. 2b). Even without repetition, though, the V-*zhe* structure may have the same function (e.g. 2c).

Locative inversion and existential status. Locative inversion in Chinese must take either *-le* or *-zhe*. It is not uncommon to find *-zhe* in this structure indicating existential status (i.e. *there is*) (cf. section 5.1.7). For example:

- (3) a. *huangshan shang chuli-zhe yi-zuo gulao*
 barren-hill on stand-DUR one-CLF ancient
de diaolou
 GEN carve-building
 “On the barren hill stands an ancient carved building”
- b. *zhuxitai shangfang gua-zhe hongbu jufu heng’e*
 rostrum over hang-DUR red-cloth huge banner
 “Over the rostrum was hung a huge red banner”

There are 23 instances of locative inversion with *-zhe* in the Weekly training corpus, and three instances in the test corpus. All of them indicate existential status. Table 5.1 shows the functions of the durative *-zhe* found in the Weekly corpus. It can be seen from the table that two major functions of *-zhe* are to signal the continuation of a durative situation and to express overlapping actions in the background. It is hardly surprising that half of the situations presented with the durative aspect are in the background because, as an imperfective aspect marker, *-zhe* prototypically supplies “supportive or subsidiary background information” in narration (Binnick 1991:397; cf. Du 1999).

Table 5.1. Functions of the durative *-zhe*

Corpus	Durativity	Overlapping	Locative inversion
Training	73	100	23
Test	17	22	3
Total	90	122	26
Percent	37.82%	51.26%	10.92%

Posture and positional verbs form a special class in that they can either denote an activity or the state resulting from that activity. Posture verbs like *zhan* “stand”, *zuo* “sit”, *tang* “lie”, *dun* “squat”, *pa* “crouch” and *ting* “stop; park (a car)” refer to verbs indicating posture or physical disposition at a location. Positional verbs like *chuan/dai* “to put on; wear”, *na* “take; hold”, *fang* “put” and *gua* “hang” refer to verbs that indicate where something has been put or placed. When verbs of this class take *-zhe*, *-zhe* selects their stative reading to signal the ongoing posture or position of an entity (cf. Li & Thompson 1981:218). For example:

- (4) a. *ta shencai shouchang, dai-zhe yanjing*
 he figure slim-tall, wear-DUR spectacle
 “He is tall and slim, wearing a pair of glasses”
 b. *ta zai fangzi li zuo-zhe* (Li & Thompson 1981:219)
 he in house in sit-DUR
 “He is sitting in the house”

The positional verb *dai* “put on; wear” and the posture verb *zuo* “sit” can denote an activity (i.e. *to put on a pair of glasses* and *to sit down*) or a state associated with this activity (i.e. *to wear a pair of glasses* and *to be in the physical disposition of sitting*) (cf. section 5.1.6). But when they take *-zhe*, the stative meanings are more salient. This is shown clearly by the 28 instances of such verbs found in the Weekly corpus. The durative *-zhe* can interact with posture and positional verbs to signal continuance, to express overlapping situations, or to occur in locative inversion, as shown in Table 5.2.

Table 5.2. Interaction of *-zhe* with posture and positional verbs

Function	Continuance	Overlapping	Locative inversion	Total
Frequency	9	10	9	28
Percent	32.1%	35.8%	32.1%	100%

5.1.2 *-Zhe*: a marker of the resultative aspect?

While *-zhe* is viewed in this book as a durative aspect marker, a recent trend in the literature on aspect in Chinese is to treat *-zhe* as a marker for the resultative aspect. Yeh (1991:238) and Smith (1991, 1997:76, 273–274), for example, argue that “resultative imperfective viewpoints present a state that follows the final point of a telic event” (Smith 1997:76). More precisely, such viewpoints focus on “the interval after the change of state” (Smith 1997:76). For example (*ibid*:273):

- (5) a. *qiang shang gua-zhe ji-zhang hua*
 wall on hang-DUR a-few-CLF picture
 “Several pictures hung on the wall”
 b. *ta zai chuang shang tang-zhe*
 he on bed on lie-DUR
 “He is lying on the bed”

- c. *men shang xie-zhe si-ge zi*
 door on write-DUR four-CLF character
 “Four characters are written on the door”

In these sentences, just as Smith (1997:273) argues, *-zhe* focuses on the statives of position and posture that result from an event, i.e. the resultant states of *gua* “to hang” (5a), *tang* “to lie” (5b) and *xie* “to write” (5c). The states presented here are “resultative”. Following Yeh (1991) and Smith (1991), Pan (1998:6) maintains that the imperfective aspect marked by *-zhe* “is not simply a durative aspect.” He argues further that *-zhe* does not focus on the finishing point of the event, the coming about of the result, or the (dis)appearance of the state; rather it focuses on the state after the finishing point and conveys the idea that the state holds for a period of time. Hence it is called the resultative aspect. Du (1999) considers *-zhe* as a durative resultative aspect marker which “necessarily focuses on the resulting state after the final endpoint of the event.” Furuli (1997) also claims that the imperfective *-zhe* in Chinese indicates “that the objective end of an action is reached” and focuses on “the resulting state.” The “resultative” property of *-zhe* is discussed in full detail in Yeh (1991) and is illustrated diagrammatically by Smith (1991:363) (Figure 5.2.)

The above observations, either made by Smith herself or others under her influence, are insightful. On the other hand, however, Smith’s examples contradict her own assertion that “resultative imperfective viewpoints” present a state that follows the final point of a *telic* event, because *gua ji-zhang hua* “to hang several pictures” and *tang zai chuang shang* “to lie on bed” in her examples are both *atelic* events.³ Furthermore, it is also inappropriate to say that *-zhe* in (5b) indicates the “resultative” state of the event *tang* “to lie”, rather the durative marker here simply signifies the duration of the event itself.⁴ The authors who consider *-zhe* as a resultative aspect marker would find their theory unable to account for the following examples:

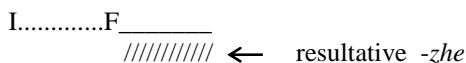


Figure 5.2. Temporal schema of the resultative aspect: *-zhe*

- (6) a. *dui anfan you-zhe shenke de yinxiang*
of criminal have-DUR deep GEN impression
“(Zou) had a deep impression of the criminal”
- b. *liang ren zhongjian fangfu ge-zhe yi-ge*
two person middle as-if separate-DUR one-CLF
Taipingyang
the-Pacific-ocean
“The two of them seemed to be separated by a Pacific ocean”
- c. *Mao Zedong xiao-zhe dui ta shuo [...]*
Mao Zedong smile-DUR to he say
“Smiling, Mao Zedong said to him [...]”

In (6a), *-zhe* simply indicates continuance of the state of possession as *you* “have” is a stative verb which cannot yield a result; (6b) is an instance of locative inversion while (6c) is an instantiation of the V_1 -*zhe* V_2 construction. In these examples, it can hardly be said that *-zhe* “focuses on the interval after the final endpoint of the event” (Yeh 1991:238). Rather, *-zhe* simply indicates the duration of situations *per se*. Just as noted at the beginning of this section, the durative aspect marked by *-zhe* indicates the durative nature of a situation. That is, *-zhe* only signifies durativity. Whether it refers to a situation *per se* or its resultant state is related to the semantic property of verbs and has nothing to do with the durative marker *-zhe* (cf. also Zuo 1997: 112). Rather, it depends upon whether the given situation, i.e. state, makes any reference to its resulting event (cf. Hu 1995). This approach can better explain the ambiguous sentences as follows:

- (7) a. *tianli zhong-zhe hua* (Smith 1997:275)
field plant-DUR flower
a’. “Flowers are planted in the field”
a”. “In the field flowers are being planted”
- b. *shiren chuan-zhe shixin de jiake,*
poet wear/put-on-DUR fashionable GEN jacket,
haobu deyi (Dai 1997:90)
very pleased
b’. “The poet is wearing a fashionable jacket, feeling very pleased”
b”. “The poet is putting on a fashionable jacket, feeling very pleased”

Smith (1997:275) attributes the ambiguity of sentences like these to the ability of *-zhe* to focus on both *external* and *internal* intervals, which clearly contra-

dicts her argument in favour of the resultative aspect, because the resultative state is defined as the state after the final endpoint. It is clear that the ambiguity arises simply because positional verbs have the dual nature of dynamicity and stativity (cf. sections 5.1.1 and 5.1.6).

In sum, *-zhe* marks the durative aspect rather than the resultative aspect as Smith, among others, suggests. The aspect marker *-zhe* is characterised by durativity (section 5.1.4), non-holisticity (section 5.1.5) and the dual nature of dynamicity and stativity (section 5.1.6). But before these features are discussed, it is appropriate to examine the interaction between the durative aspect and situation types, which will be done in the following section.

5.1.3 The interaction between the durative aspect and situation types

As noted in section 5.1.1, *-zhe* is sensitive to the $[\pm\text{durative}]$ and $[\pm\text{result}]$ values of a situation. Basically, it is only compatible with $[\text{+durative}]$ and $[-\text{result}]$ situations. Table 5.3 shows the distribution of 238 instances of *-zhe* across situation types and the functions of *-zhe*. In terms of functions (i.e. Continuanance, Overlapping, and Existential/locative inversion), it appears that for ILSs and SLSs the predominant function of *-zhe* is to signal continuance. Locative inversion and existential readings of *-zhe* are most frequent in the two types of states but rare in other situation types. For activities, overlapping is the most important function of *-zhe*, followed by continuance. In this section, we will examine how *-zhe* interacts with various situation types.

Table 5.3. Distribution of *-zhe* in the Weekly corpus

Corpora/ Function	ILS			SLS			ACT			SEM			ACC			Total
	C	O	E	C	O	E	C	O	E	C	O	E	C	O	E	
Training	21	3	11	36	13	12	35	59	0	3	1	0	1	1	0	196
Test	1	0	0	0	1	2	16	21	1	0	0	0	0	0	0	42
<i>Total</i>	36			64			132			4			2			238
<i>Percent</i>	15.13%			26.89%			55.46%			1.68%			0.84%			100%

Smith (1997:273) and Bohnemeyer (2000) give the following examples to argue that ILSs are not compatible with *-zhe*:

- (8) a. **ta conghui-zhe* (Smith 1997:274)
 *he intelligent-DUR
 “He is intelligent”
 b. **ta pang-zhe* (Bohnenmeyer 2000:34)
 *he fat-DUR
 “He is fat”

While the above two sentences are intuitively unacceptable, the assertion made by these authors is far from being true. As can be seen from Table 5.3, ILSs account for nearly over 15% of the total number of instances of *-zhe* in the Weekly training corpus. For example:

- (9) *jimo de huo-zhe, you jimo de siqu, jiu xiang shijian*
 lonely PRT live-DUR, then lonely PRT die, just like world
bu ceng you-guo wo yiyang
 not ever exist-EXP me PRT
 “(I) live in solitude, and will die in solitude, as if I had not existed in this world”

Some ILS verbs, like *yiwei* “mean”, can only be used with *-zhe*. Compare the acceptability of the attested example (10a) and its modification (10b):

- (10) a. *yuandi tabu yiwei-zhe bei taotai*
 same-place march mean-DUR PASS eliminate
 “Making no progress means being eliminated through competition”
 b. **yuandi tabu yiwei bei taotai*
 * same-place march mean PASS eliminate
 “Making no progress means being eliminated through competition”

This does not mean, however, that all ILS verbs are compatible with *-zhe*. Some ILS verbs, mainly those indicating relations, psychological sensations, and adjectival verbs indicating personal properties (i.e. quality verbs) do not take *-zhe* felicitously.⁵ These verbs include *shi* “be”, *xing* “be surnamed”, *dengyu* “be equal to”, *pa* “be afraid”, *baoqian* “be sorry”, *pang* “be fat”, *gao* “be tall” and *chengshi* “be honest”, etc. The verb *you* “have” is a special case. Although it also indicates relationship, its co-occurrence with *-zhe* is not uncommon. Of the 35 ILS verbs taking *-zhe* in the Weekly training corpus, ten cases involve *you* “have”. Furthermore, it is interesting to find that only when the internal argument of *you* “have” refers to an abstract concept can this verb take *-zhe*. When its internal argument refers to a concrete object, *you* “have” is incompatible with *-zhe*. Consider:

- (11) a. *ren de zuji yu qi shenti ge-ge bufen*
 human GEN footprint and his body each-CLF part
you-zhe yiding de bili guanxi
 have-DUR certain GEN proportion relationship
 “A footprint is proportionally related to the various parts of the human body”
- b. **tuqiang shang you-zhe yi-ge da dong*
 *abode-wall on exist-DUR one-CLF big hole
 “There is a big hole in the adobe wall”
- c. **wo you-zhe san-ben shu*
 I have-DUR three-CLF book
 “I have three books”

In (11a), as *guanxi* “relationship” is an abstract concept, *you* “have” co-occurs with *-zhe* felicitously. In contrast, as *yi-ge da dong* “a big hole” in (11b) and *shu* “book” in (11c) have specific references, *you* “have” is incompatible with *-zhe*, no matters whether *you* has an existential (11b) or possessive (11c) reading. When interacting with ILSs, *-zhe* often gives an emphatic force or indicates existential status.⁶ Here are some examples:

- (12) a. *danxin shuo-le zhenhua hou bu neng huo-zhe*
 worry say-ACTL truth after not able live-DUR
huijia
 go-home
 “He was afraid that if he told the truth, he would not be able to get home alive”
- b. *loufang qian heng-zhe liang-mi gao de zhuanqiang*
 building front lie-DUR two-meter tall GEN brick-wall
 “In front of the building lay a 2-meter-tall brick wall”

In (12a), *-zhe* emphasises the state of *being alive* when he got home, and in (12b), *-zhe* indicates the existence of a wall in front of the building.

SLSs are temporary states that are expected to end. There is a general agreement that SLSs are compatible with the durative *-zhe* (e.g. Smith 1997: 273; Bohnemeyer 2000: 35; Li 1999). As Table 5.3 shows, SLSs account for over one quarter of situations presented with the durative aspect. For example:

- (13) a. *xin-li chongche-zhe shuobuchu de ganjue*
 heart-in full-DUR unspeakable GEN feeling
 “(He) was full of an unspeakable feeling”

- b. *ta di-zhe tou xiang shi zai bei yi-fen*
 he low-DUR head as-if is PROG recite one-CLF
huiguoshu
 repentance
 “He hung his head as if he were reciting a statement of repentance”
- c. *chuang shang tang-zhe shushui de ying'er*
 bed on lie-DUR fast-asleep GEN baby
 “On the bed was lying her baby fast asleep”

It is interesting to note that of these 64 SLs, 25 involve posture and positional verbs that may denote dynamic situations in other contexts (cf. sections 5.1.2 and 5.1.6). Consider the corpus example (14a) and its modification (14b):

- (14) a. *Bulidun yisheng wei fang buce, zhengtian*
 Briton doctor for prevent unexpected, whole-day
chuan-zhe fangdan beixin
 wear-DUR bullet-proof vest
 “In order to guard against the risk of being shot, Dr. Briton was wearing his body armour all day long”
- b. *Bulidun yisheng dangshi zhengzai chuan*
 Briton doctor that-moment PROG put-on
fangdan beixin
 bullet-proof vest
 “Dr. Briton was putting on his body armour at that moment”

The verb *chuan* “put on; wear” is a positional verb. Like other positional and posture verbs, it typically denotes a stative situation (i.e. *wear*) when it takes *-zhe* (14a), though a dynamic reading is also possible (cf. section 5.1.6). When it takes the progressive *zai* (see section 5.2), however, no other reading than the dynamic is possible (14b).

Activities occur with the durative *-zhe* felicitously. The compatibility of activities with *-zhe* is well observed (Smith 1997; Li & Thompson 1981:216–227, 274; Yang 1995:131–132; Li 1999) and is confirmed by our data. Of the 196 instances of *-zhe* found in the Weekly training corpus, nearly half (48%) are affixed to activity verbs. If 23 positional and posture verbs are included in the category of activity,⁷ an even higher percentage of activity verbs are affixed with *-zhe* (53.43%). Data in the test corpus is even more illustrative (see Table 5.3). The durative *-zhe* interacting with activities can indicate either the con-

tinuance of activities or express overlapping actions. The following examples illustrate this:

- (15) a. *Lao You bashou-zhe damen* (continuance)
 Lao You guard-DUR gate
 “Lao You was guarding the gate”
 b. *ta nieru-zhe wen wo [...]* (backgrounding)
 she halt-DUR ask me
 “She asked me haltingly [...]”

Yang (1995:131–132) claims that *-zhe* is compatible with activities involving “little dynamism” such as *deng* “wait”, *na* “hold; pickup” and *zuo* “sit”, while with activities involving “a lot of dynamism”, *-zhe* either conveys an emphatic implication with the attitudinal particle *ne* or provides background information. This conclusion is, however, debatable. Although activities taking *-zhe* tend to provide background information (59 out of 94 cases in the Weekly training corpus, and 21 out of 38 cases in the test corpus), instances of “more dynamic” activities taking *-zhe* without emphatic *ne* are not hard to find. For example:

- (16) a. *yilu buzhuo-zhe yiqie zuyi duihuan-cheng*
 all-the-way hunt-DUR all able exchange-become
chaopiao de feiwu
 money GEN waste
 “They were hunting all the way for any waste that could be exchanged into money”
 b. *women likai Jiang Xiaoming jia shi, zhaizhu-men*
 we leave Jiang Xiaoming home when, creditors
hai zai houbian jiaohan-zhe
 still in/PROG behind shout-DUR
 “When we left Jiang Xiaoming’s place, those creditors were still shouting behind us”

In these sentences, the activities of *buzhuo* “to hunt for” and *jiaohan* “to shout” are in the foreground, where *-zhe* only signals the continuance or durativity of these activities.

Semelfactives are intrinsically [–durative], but their [±bounded] nature allows them to shift easily between single event and multiple event readings (cf. section 3.3.1). When a semelfactive takes *-zhe*, only an iterative multiple

event reading is possible. Compare the attested example (17a) and its modification (17b):

- (17) a. *Liu Xiaoqing pai-zhe xiao Geping de jianbang*
 Liu Xiaoqing pat-DUR little Geping GEN shoulder
shuo [...]
 say
 “Liu Xiaoqing kept patting on little Geping’s shoulder and said [...]”
- b. *Liu Xiaoqing pai-le pai xiao Geping de jianbang*
 Liu Xiaoqing pat-ACTL pat little Geping GEN shoulder
shuo [...]
 say
 “Liu Xiaoqing patted on little Geping’s shoulder and said [...]”

The same event of patting is presented differently in the above sentences: *-zhe* in the first sentence focuses on its durative nature, whereas verb reduplication in the second emphasises its transitoriness (cf. section 4.3.1). In (17b), there may be one or several pats, but the count of actions is not of concern to the delimitative aspect, which only treats the event denoted by a reduplicated verb as transitory (cf. section 4.3.3). On the other hand, when *-zhe* replaces verb reduplication as in (17a), even a semelfactive is given a durative multiple event reading. The marker *-zhe* interacting with semelfactives either indicates continuance or express overlapping actions which provide background information.

Accomplishments have a natural final spatial endpoint, therefore they normally carry narration forward and appear in the foreground (cf. Du 1999). As such, accomplishments are rarely found to take the durative *-zhe*, as shown in Table 5.3 above. When accomplishments take *-zhe*, they typically also co-occur with the progressive *zai* to form a complex viewpoint which signals “a continuation of a progressive activity” (Zhang 1995:137).⁸ Here are some examples. Note that in (18a), *zai* has the double role of a preposition and a progressive aspect marker.

- (18) a. *zai yi-jia fandian zheng yu ren*
 in/PROG one-CLF hotel right-now with person
tan-zhe yi-bi buxiao de waihui
 talk-DUR one-CLF not-small GEN exchange
chaomai
 speculation

“(He) was discussing a big deal of speculation in foreign exchange in a hotel”

- b. *Jinliqi yizhi zai xinxin-kuku de zuo-zhe*
 Kingrich all-the-time PROG strenuously PRT do-DUR
yi-jian shi
 one-CLF thing
 “Kingrich has been working strenuously all along on one thing”

Achievements are [–durative] and [+result] situations. Situations of this type are expected to be strictly incompatible with *-zhe* (cf. also Smith 1997:75) for the following reasons.⁹ First, the encoding of a result makes a situation complete and perfective (cf. Dai 1997:83), and thus incompatible with the imperfective nature of *-zhe*. Second, although it may take some time to achieve a result, the achievement of the result *per se* is instantaneous (cf. section 3.4.2). This is incompatible with the durative nature of *-zhe*. Third, from the perspective of the discursual function of viewpoint aspect, a situation with some result encoded therein is more likely to provide foreground rather than background information (cf. also Yang 1995:133). Hence, achievements tend to be presented with perfective viewpoints. This prediction is in fact borne out by the corpus data. As shown in Table 5.3, of 196 instances of *-zhe* found in the Weekly training corpus and 42 found in the test corpus, none involves an achievement. The following examples are thus intuitively unacceptable:

- (19) a. **wo kan-wan-zhe zhe-pian xiaoshuo*
 *I read-finish-DUR this-CLF story
 “I was finishing reading this novel”
 b. **fuwu-xiaojie duan-shang-zhe yi-pan you yi-pan*
 *waitress serve-up-DUR one-CLF again one-CLF
jiayao
 delicious-dish
 “The waitress was serving delicious dishes one after another”

5.1.4 The durativeness of *-zhe*

To signal durativity is a defining feature of *-zhe* (cf. Li & Thompson 1981:217; Smith 1997:273; Norman 1988; Zhang 1995:134). This means that all situations taking *-zhe* are by nature durative and continuous. As noted above

(section 5.1.2), with positional or posture verbs, *-zhe* may also indicate the durative nature of a situation *per se* or the durative existence of its resultant state. But in either case, the durativity signalled by *-zhe* remains unchanged. Consider (1b) and (3b) above, repeated here as (20a) and (20b):

- (20) a. *ta zheng pansuan-zhe tuoshen zhi ji*
 he right-now think-DUR escape GEN plan
 “He was thinking of a plan to escape”
 b. *zhuxitai shangfang gua-zhe hongbu jufu heng’e*
 rostrum over hang-DUR red-cloth huge banner
 “Over the rostrum was hung a huge red banner”

In the first sentence, the durative aspect presents the event of *pansuan* “to think” itself and focuses on its durative nature. The second sentence has a positional verb (*gua* “hang”) as its predicate. With verbs of this category, *-zhe* does not present the event itself as durative, but rather focuses on the durative existence of its resultant state. The length of duration of an event or its resultant state may vary, but this is not of concern to the durative aspect. What is relevant is that the event or its resultant state is conceived of as durative. Because of this feature, *-zhe* can be used as a diagnostic test for durativity (cf. section 3.2.2).

The durative feature of *-zhe* is more evident in its effect of triggering a semantic assimilation when a semelfactive takes *-zhe* (cf. section 5.1.3). As argued in section 3.3.1, semelfactives are intrinsically [–durative]. When an instantaneous event co-occurs with the durative marker *-zhe*,¹⁰ its intrinsic instantaneous feature is overridden by the durativity of the aspect marker. The semantic assimilation occurs because an “empty” function word conveys a stronger class meaning than a concrete verb (cf. Dai 1997:115). Therefore, a combination incompatible with the class meaning is either unacceptable, as in the case of an achievement, or must undergo a semantic assimilation to allow for a derived iterative reading.

It should be noted, however, that the durative nature of a derived semelfactive and that of an inherently durative situation are different. As discussed above, a derived iterative reading is obligatory when a semelfactive takes *-zhe*; for an inherently durative event, on the other hand, no semantic assimilation is required, and thus no iterative reading is implied. Compare the corpus example (21a) and its modification in (21b):

- (21) a. *Yang Xianqing de muqin yao-zhe tou dui*
 Yang Xianqing GEN mother shake-DUR head to
jizhe tanxi
 journalist sigh
 “Shaking her head, Yang Xianqing’s mother sighed to the journalist”
- b. *Yang Xianqing de muqin di-zhe tou tanxi*
 Yang Xianqing GEN mother low-DUR head sigh
 “With her head hung, Yang Xianqing’s mother sighed”

The event *yaotou* “to shake one’s head” in (21a) is intrinsically [–durative] whereas *ditou* “to hang one’s head” in (21b) is inherently [+durative]. When they take *-zhe*, both situations are durative. But still, their temporal structures are different, as shown in Figure (5.3). In the figure, t_1 - t_2 is the span for observation, the dotted lines on both sides mean that the events may extend in both directions, because no endpoints are involved when a situation is presented with the durative aspect. The dots within the observational span stand for the durative interval which includes all the subintervals of iterated instances of *yaotou* “to shake one’s head” while the solid line stands for the durative interval of *ditou* “to hang one’s head”.

The durativity of *-zhe* contrasts strikingly with the transitoriness of the delimitative aspect (see section 4.3.3). When presented with the delimitative aspect, even a durative situation demonstrates the feature of transitoriness (22a); in contrast, when presented with the durative aspect, even an instantaneous event shows the feature of durativity (22b).

- (22) a. *deng wo zai zixi kan-kan*
 let me again carefully look-look
 “Let me take another careful look”

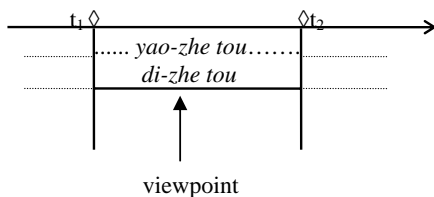


Figure 5.3. Durativity of a derived semelfactive and a durative situation

- b. *mo-bu-zhao tounao de Li Shoulai*
 touch-not-reach head-brain GEN Li Shoulai
duosuo-zhe shuo [...]
 tremble-DUR say
 “Li Shoulai was bewildered and said in a trembling voice [...]”

5.1.5 The non-holisticity of *-zhe*

Non-holisticity means the internal temporal structure of a situation is decomposable. It is a feature shared by all imperfective viewpoints. As can be seen in Figure 5.1, the durative *-zhe* only focuses on the medial part of a situation between its initial and final endpoints but the endpoints themselves are not included. Therefore, this viewpoint is not concerned with when a situation initiates or terminates, and the focused durative part can extend in both directions (as indicated by the double arrow in Figure 5.1). For example:

- (23) *wo jiali gongfeng-zhe si-wu zun pusa*
 I home enshrine-DUR four-five CLF Bodhisattva
 “I enshrine and worship a couple of Bodhisattva at home”

As *-zhe* focuses only on the medial part of the situation described in this sentence, we do not know when the situation *gongfeng* “enshrine and worship” started and when it will terminate, such information is actually not the object of concern when a situation is presented with the durative aspect; we only know that, at the point of observation, the situation is true. Of course, because the focused part can extend in both directions, the point of observation can move backward or forward on the time axis within the boundaries of the endpoints.

Because of the imperfective nature of *-zhe*, this marker does not co-occur felicitously with time words denoting a specific temporal length (i.e. *for*-PPs). Similarly it does not co-occur felicitously with verbal classifier phrases indicating the count of actions, as these function to impose a final endpoint upon a situation and thus have a temporal bounding effect (cf. section 3.4.3). The following examples are thus unacceptable:

- (24) a. **Yue Hai'ou zhengzha-zhe shi-fenzhong*
 *Yue Hai'ou struggle-DUR 10-minute
 *“Yue Hai'ou was struggling for 10 minutes”

- b. **Liu Xiaoqing pai-zhe xiao Geping de jianbang*
 *Liu Xiaoqing pat-DUR little Geping GEN shoulder
san-xia
 three-CLF
 *‘‘Liu Xiaoqing was patting on little Geping’s shoulder three times’’

The *for*-PP *shi-fenzhong* ‘‘10 minutes’’ and the verbal classifier phrase *san-xia* ‘‘three times’’ bound a situation temporally, thus making these situations incompatible with the open-ended feature of the durative aspect. Removing these delimiting devices or replacing *-zhe* with *-le* would make these sentences grammatical. Similarly, the durative *-zhe* cannot co-occur with RVCs, because RVCs focus on the result state of an event and imply a final endpoint, which is incompatible with the durative nature of *-zhe* (cf. section 5.1.3).

5.1.6 The dual dynamicity/stativity of *-zhe*

The durative *-zhe* has traditionally been referred to as a stative aspect marker (e.g. Smith 1997:77, 271–273; Pan 1998; Zhang L. 1996; Li 1999). Smith (1997:77) pushed the stativity of the durative aspect to prominence by arguing that ‘‘a static property [...] is imposed on all situations that the viewpoint focuses.’’ This biased view is closely related to her treatment of *-zhe* as a resultative imperfective marker. Resultative readings come from posture and positional verbs (Smith 1997:273). But as noted in section 5.1.2, verbs of this special category only account for a small proportion of verbs taking *-zhe*.¹¹ Therefore, those who argue that *-zhe* is a ‘‘stative imperfective’’ (Smith 1997:273) are only partly correct.

As initial and final endpoints are not in the focus of the durative aspect, the dynamicity demonstrated by *-zhe* is related to the heterogeneous temporal structure of a situation without regard to its endpoints (cf. section 5.1.5). In other words, each subinterval differs from other subintervals within the durative span. Dai (1997:88) refers to such a property as ‘‘change of process’’. Consider the sentences in (16), repeated here as (25):

- (25) a. *yilu buzhuo-zhe yiqie zuyi duihuan-cheng*
 all-the-way hunt-DUR all able exchange-become
chaopiao de feiwu
 money GEN waste
 ‘‘They were hunting all the way for any waste that could be exchanged into money’’

- b. *women likai Jiang Xiaoming jia shi, zhaizhu-men*
 we leave Jiang Xiaoming home when, creditors
hai zai houbian jiaohan-zhe
 still in/PROG behind shout-DUR
 “When we left Jiang Xiaoming’s place, those creditors were still shouting behind us”

The events depicted in these sentences, i.e. *buzhuo* “to hunt for” and *jiaohan* “to shout” both demonstrate heterogeneous temporal structures. When people hunt for something, for example, not only do their bodies have to move from one place to another, their eyes (and probably hands) also move swiftly.

On the other hand, *-zhe* can be commonly used to present stative situations as homogeneous moments and thus demonstrates the feature of stativity (cf. section 5.1.3). This does not mean, however, that all stative verb constellations can take *-zhe*. As noted in section 5.1.3, ILS verbs indicating relationship, personal properties and psychological sensations are generally incompatible with *-zhe*.

The dual nature of dynamicity and stativity of the durative aspect is closely related to the semantic feature of verb constellations. With a dynamic verb constellation, the situation presented with the durative aspect normally demonstrates the feature of dynamicity; likewise, with a stative verb constellation, the situation shows the feature of stativity. The duality is most clearly illustrated by the case of posture and positional verbs (cf. section 5.1.2). Consider the attested example (14a), repeated below as (26a) and its modification (26b):

- (26) a. *Bulidun yisheng wei fang buce, zhengtian*
 Briton doctor for prevent unexpected, whole-day
chuan-zhe fangdan beixin
 wear-DUR bullet-proof vest
 “In order to guard against the risk of being shot, Dr. Briton was wearing his body armour all day long”
- b. *tingdao jijiu ling xiang, Bulidun yisheng*
 hear emergency bell ring, Briton doctor
chuan-zhe dayi chong xiang jijiuoshi
 put-on-DUR overcoat rush towards first-aid-room
 “At the emergency bell, Dr. Briton rushed towards the first-aid room while he was still putting on his overcoat”

In the two sentences, the same positional verb *chuan* ‘wear; put on’ is used, and both sentences are presented with the durative aspect. But as the translations show, they contrast with each other in that (26a) describes a stative situation of Dr. Briton’s being in his body armour whereas (26b) describes a dynamic situation of his putting on his overcoat. The dynamic situation can be considered as the cause of the stative situation, while the stative situation can be regarded as the result of the dynamic event. In other words, the stative situation can be construed as an extension of the dynamic event. When agents are absent, i.e. in locative inversion constructions, positional and posture verbs interacting with *-zhe* unmistakably convey stative situations, as shown in (20b).

Having discussed the aspectual features of the durative aspect, it is time to explain the interchangeability of *-zhe* and *-le*. As the two belong to opposite categories, any theory of aspect in Chinese must be able to provide a reasonable explanation. In the section that follows, we will give our account of this interchangeability.

5.1.7 The interchangeability of *-zhe* and *-le*

An interesting phenomenon to note is that in some contexts *-zhe* and *-le* may be freely interchanged without causing any significant change in meaning. For example:

- (27) a. *kai-zhe/-le chuanghu shuijiao*
 (Encyclopaedia of China)
 open-DUR/ACTL window sleep
 ‘sleep with the window open’
- b. *chuan-zhe/-le na-jian yifu zhen haokan*
 (Zuo 1997)
 wear-DUR/ACTL that-CLF dress really good-look
 ‘look really smart in that dress’
- (28) a. *chuang shang fang-zhe/-le yi-ben shu* (Du 1999)
 bed on put-DUR/ACTL one-CLF book
 ‘On the bed lay a book’
- b. *qiang shang gua-zhe/-le yi-fu hua* (Dai 1997)
 wall on hang-DUR/ACTL one-CLF picture
 ‘On the wall was hung a painting’

As we know, *-zhe* is an imperfective marker whereas *-le* is a perfective marker. How is that they are interchangeable? In this book, we argue, based on empirical data, that this interchange occurs only when one of the following two pre-requisites is satisfied, i.e. expressing overlapping situations which provide background information (as in 27), or occurring in locative inversion constructions that indicate existential status (as in 28).

As noted in section 5.1.1, one of the major functions of *-zhe* is to occur in the V_1 -*zhe* V_2 structure to express overlapping situations which provide background information. When V_1 is a stative verb (either an ILS or an SLS),¹² *-zhe* is interchangeable with *-le*. This assumption is supported by all of the 40 instances of stative verbs providing background information. For example:

- (29) a. *Liu Kunxian zhihao dai-zhe yijia laoxiao,*
Liu Kunxian have-to bring-DUR one-family old-young,
dadao hui-fu
take-road return-home
“Liu Kunxian had to go back to his hometown with his family”
- b. *yi-ge gong'an renyuan, chuan-zhe wu-liu nian qian*
one-CLF police person, wear-DUR 5-6 year ago
de xiezi, shahai-le yu qi changqi pinju
GEN shoes, kill-ACTL with him long-time cohabit
de qingfu
GEN paramour
“A policeman, in the shoes he wore several years ago, killed his paramour who had lived with him for a long time”

In these sentences, *-zhe* can be replaced with *-le*. When *-zhe* indicates continuance, however, replacing *-zhe* with *-le* normally results in a change in meaning. Consider the attested example (30a) and its modification (30b):

- (30) a. *tamen dui “Nanjing da tusha” you-zhe teshu*
they towards Nanjing big massacre have-DUR special
*de qinggan*¹³
GEN emotion
“They had a special emotion towards the movie *Massacre in Nanjing*”
- b. *tamen dui “Nanjing da tusha” you-le*
they towards Nanjing big massacre have-ACTL
teshu de qinggan
special GEN emotion

“They started to have a special emotion towards the movie *Massacre in Nanjing*”

The difference between these two sentences is self-evident. While (30a) carries an emphatic implication, (30b) has an ingressive reading, as shown in the translations. When affixed to a dynamic verb, *-zhe* is not interchangeable with *-le*, no matter whether *-zhe* provides background information or indicates continuance. Otherwise, there will be a significant change in meaning. This point is most clearly illustrated by accomplishment verbs because of their telicity value. Consider the corpus example (31a) and its modification (31b):

- (31) a. *du-zhe zhexie wenzhang, wanquan tongyi zhiwai,*
 read-DUR these essays, fully agree besides,
bujin chansheng yi-ge wenti
 can't-help emerg one-CLF problem
 “While reading these essays, besides agreeing to what they said,
 I couldn't help thinking of a problem”
- b. *du-le zhexie wenzhang, wanquan tongyi zhiwai,*
 read-ACTL these essays, fully agree besides,
bujin chansheng yi-ge wenti
 can't-help emerge one-CLF problem
 “Having read these essays, besides agreeing to what they said,
 I couldn't help thinking of a problem”

The durative *-zhe* in (31a) means that a problem came to “my” mind while the reading event was in progress. In contrast the actual *-le* in (31b) means that the problem emerged when the reading event was actualised, or more precisely, after the reading event was completed, because *reading these essays* is a telic situation (cf. section 4.1.2).

The interchangeability of *-zhe* and *-le* in locative inversion constructions is well recognised (e.g. Li & Thompson 1981:512; Yang 1995; Pan 1998; Zuo 1997; Du 1999; Hu 1995), but the pre-requisites for this interchange have rarely been explored. We argue that the interchange between *-zhe* and *-le* is not unconditional. Only when necessary prerequisites are satisfied can these two aspect markers be interchanged. Let us first consider the following minimal pair (the first part of 32a is an attested example and the other versions are modifications):

- (32) a. *chuang shang tang-zhe/*-le ta de haizi*
 bed on lie-DUR/*ACTL she GEN child
 “Her child was lying on the bed”
 b. *chuang shang tang-zhe/-le yi-ge haizi*
 bed on lie-DUR/ACTL one-CLF child
 “A child was lying on the bed”

As the sentences in (32) show, only locative inversion constructions with an indefinite NP in the post-verbal position indicate an existential reading. When an indefinite NP occupies the post-verbal position in locative inversions, both *-zhe* and *-le* can be used. But when a definite NP appears in this position, only *-zhe* but not *-le* can be used. This difference arises from the different discursual functions of the perfective and the imperfective. An indefinite new entity is most likely to be introduced in the foreground whereas a definite old entity is more likely to appear in the background. As such, a post-verbal definite NP is expected to co-occur with *-zhe* and a post-verbal indefinite NP to co-occur with *-le* naturally. However, the difference as demonstrated by *-zhe* and *-le* in existential/locative inversion constructions is not symmetrical. The asymmetry can be accounted for by the fact that *-zhe*, in addition to inducing a background effect, can also be used in an apparently “foregrounded” situation (cf. Du 1999) whereas *-le* never occurs in the background.

Apart from post-verbal NPs, preverbal agent NPs also affect the interchangeability between *-zhe* and *-le*. These two markers behave differently with respect to their compatibility with agent NPs (cf. Du 1999; Pan 1998). When agent NPs are present in locative inversion constructions, as in (33b), only *-le* but not *-zhe* is felicitous.

- (33) a. *caodi shang fang-zhe/-le yi-liang motuoche*
 grassland on put-DUR/ACTL one-CLF motorcycle
 “A motorcycle was placed on the grassland”
 b. *caodi shang Yuehan fang-le/*-zhe yi-liang*
 grassland on John put-ACTL/*DUR one-CLF
motuoche
 motorcycle
 “John placed a motorcycle on the grassland”

In addition to the (in)definiteness of NPs, the semantic features of verbs play a central role. When achievement verbs occur in locative inversion constructions, *-le* is the only felicitous choice, because *-zhe* is incompatible with

achievements (cf. section 5.1.3). Compare the attested example (34a) and its modification (34b):

- (34) a. *biantiao shangmian xie-zhe/-le*
 note on write-DUR/ACTL
si-ge zi
 four-CLF character
 “On the note was written 4 characters”
- b. *biantiao shangmian xie-man-le/*-zhe zi*
 note on write-full-ACTL/*DUR character
 “The note was full of characters”

The verb *xie* “write” in (34a) is an accomplishment verb, therefore both *-zhe* and *-le* are felicitous. When the RVC *man* “full” is attached to *xie*, the verb is turned into an derived achievement verb at the nucleus level (cf. section 3.4.1). Hence *-zhe* is ill-formed in (34b). As the RVC *man* “full” in the derived verb *xie-man* “write-full” is used to describe the status of the *locus*, the focus of the compound verb is on the preverbal NP *biantiao* “note” rather than on the post-verbal theme NP *zi* “characters”. As *-zhe* is a theme-only aspect marker whereas *-le* is not limited to the theme (cf. Du 1999), only *-le* but not *-zhe* can occur in (34b).

Finally, the selection of *-zhe* and *-le* reflects a conceptual difference. When an existential construction denotes actual existence in the real world, provided that the above pre-requisites are satisfied, *-zhe* and *-le* are interchangeable. When an existential construction denotes the metaphorical status of existence (Hu 1995),¹⁴ however, only *-zhe* is felicitous. Consider the following minimal pair from Hu (*ibid*):¹⁵

- (35) a. *shushao shang gua-zhe/-le yi-ge shizi*
 tree-top on hang-DUR/ACTL one-CLF persimmon
 “A persimmon hung on top of the tree”
- b. *shushao shang gua-zhe/*-le yi-lun*
 tree-top on hang-DUR/*ACTL one-CLF
mingyue
 bright-moon
 “A bright moon hung on top of the tree”

On the one hand, because we know that a persimmon can actually exists on top of a persimmon tree in the real world, both aspect markers can occur in

(35a) felicitously. On the other hand, as a moon hung on top of a tree is a metaphorical image, *-le* in (35b) is ill-formed.

5.2. The progressive aspect: *zai*

The progressive *zai* as an aspect marker is not as well established as *-zhe*.¹⁶ It is either treated as an adverb (e.g. CED 1997; Henne et al. 1977; Dai 1997: 105) or conflated with *-zhe* (e.g. Li & Thompson 1981; Zhang 1995; Tiee 1986).¹⁷ We claim in this book that it is essential to distinguish between these two viewpoints (section 5.2.1), because *zai* behaves differently in respect to its interaction with situation aspect (section 5.2.2). The progressive aspect is marked by *zai*, which is characterised with the aspectual features of progressiveness (section 5.2.3), non-holisticity (section 5.2.4) and dynamicity (section 5.2.5).

5.2.1 The progressive *zai* vs. the durative *-zhe*

The meaning of *zai* is spatio-temporally motivated (cf. Comrie 1976; Zhang 1995: 132). *Zai* was historically a locative verb (36a) and a locative preposition (36b) which are only spatially defined. It was later generalised to map spatial notions onto the temporal domain (cf. Shen 1998) and functioned as an aspect marker signalling progressiveness (36c).¹⁸

- (36) a. *Liu qi zai shuifang li*
Liu wife in bedroom in
“Liu’s wife was in the bedroom”
- b. *Liu qi zai shuifang li xi-le ge zao*
Liu wife in bedroom in take-ACTL CLF bath
“Liu’s wife took a bath in the bedroom”
- c. *Liu qi zai xizao*
Liu wife PROG take-a-bath
“Liu’s wife was taking a bath”
- d. *Liu qi zai shuifang li xizao*
Liu wife in/PROG bedroom in take-a-bath
“Liu’s wife was taking a bath in the bedroom”

As these usages are all current in modern Chinese, it is sometimes difficult to

distinguish which is which (e.g. 36d). Chao (1968) treats *zai* in sentences like (36d) as a verb and the whole predicates as a serial verb construction, while Tai (1973) regards it as a locative preposition and the prepositional phrase as an adverbial. We assume that *zai* in this context has the double functions of a preposition and a progressive aspect marker for the following reasons. On the one hand, if the activity verb *xizao* “take a bath” is replaced by an achievement verb *si* “die” (i.e. **Liu qi zai shuifang-li si* “Liu’s wife was dying in the bedroom”), the sentence becomes ill-formed (cf. Chen 1978; Yang 1995), as the progressive *zai* is normally incompatible with achievements (see section 5.2.2). On the other hand, (36d) can be used to answer either of the questions: “What was Liu’s wife doing in the bedroom?” and “Where did Liu’s wife take a bath?” (cf. Li 1999). This assumption is supported by all of the 25 such instances (21 in the training corpus and four in the test corpus) in the Weekly corpus. Of course, when there is another aspect marker in the sentence, *zai* only functions as a locative preposition, as shown in (36b).

Zai as a progressive aspect marker should be kept separate from the durative aspect marker *-zhe*, because they behave differently in respect to distribution, meaning, function and sensitivity to the aspectual feature of dynamicity.¹⁹

The most apparent distributional difference is that *zai* always precedes a verb whereas *-zhe* always follows a verb. Therefore, only the patterns of *waimian zai xiayu* and *waimian xia-zhe yu* “It is raining outside” are acceptable. Another syntactic difference is that only *-zhe* not *zai* can appear in locative inversion constructions (see section 5.1.7). Compare the acceptability of the following pair (37a is a corpus example):

- (37) a. *chuang shang tang-zhe shushui de ying'er*
 bed on lie-DUR fast-asleep GEN baby
 “Her baby was lying fast asleep on the bed”
 b. **chuang shang zai tang shushui de ying'er*
 *bed on PROG lie fast-asleep GEN baby
 “Her baby was lying fast asleep on the bed”

Semantically, *zai* focuses on progressiveness whereas *-zhe* focuses on durativity, though both viewpoints present the same medial part of a situation and involve no endpoints. In other words, situations marked by *zai* are more progressive while situations marked by *-zhe* are more continuous (cf. Zhang

1995:132). This point is illustrated well by posture and positional verbs (see section 5.1.3). Consider the corpus example (38a) and its modification (38b):

- (38) a. *tamen shou zhong dou ti-zhe chenzhong de*
 they hand in all carry-DUR heavy GEN
baodai
 bag
 “Each of them was holding a heavy bag in hand”
- b. *tamen dou zai ti baodai*
 they all PROG carry bag
 “They were all picking up bags”

(38a) with *-zhe* implies that the bags were continuously in their hands, whereas (38b) marked by *zai* does not have this implication. Rather it indicates that the situation of picking up bags was ongoing and in progress, but this meaning is absent in (38a). This semantic feature of the progressive is sometimes referred to as “stage property” (Smith 1997:77). This means that the progressive aspect typically presents situations with successive stages.

The stage property makes *zai* compatible only with non-statives because truly stative situations like ILSs are not supposed to have successive stages (see section 3.3.3; cf. also Vendler 1967). This analysis is confirmed by the corpus data. Seventy-seven situations taking *zai* found in the Weekly training corpus and 11 instances found in the test corpus are all non-statives.²⁰ That is why the progressive has generally been used as a diagnostic test for dynamicity (cf. section 3.2.1). The durative *-zhe*, on the other hand, is not sensitive to the feature of dynamicity, therefore it is compatible with both stative and dynamic situations (cf. section 5.1.6).

As noted in section 5.1.1, one of the major functions of *-zhe* is presenting an accompanying situation to provide background information, as in *ta kan-zhe bao chifan* “He ate while reading newspapers”, where *-zhe* plays an accompanying role (cf. Zhang 1995:135). The progressive *zai*, however, does not have this function, thus **ta zai kanbao chifan* “*He is reading newspapers eating” is infelicitous.

Zhang (1995:133) observes that the situation taking the progressive *zai* does not occur with the ‘aspect verb’ *kaishi* “begin”, which denotes the beginning of a situation, because *zai* “focuses on one segment to indicate the whole progression.” But the co-occurrence of *-zhe* with *kaishi* “begin” is not restricted. This contrast is shown in the corpus example (39a) and its modification (39b):

- (39) a. *cong wushi-niandai qi, Wu Xumang jiu*
 since 1950's onwards, Wu Xumang already
kaishi congshi-zhe zuji jianyan de jiaoxue
 start do-DUR footprint identify GEN teaching
 "Wu Xumang began to teach footprint identification in the 1950s"
- b. **cong wushi-niandai qi, Wu Xumang jiu*
 *since 1950's onwards, Wu Xumang already
kaishi zai congshi zuji jianyan de jiaoxue
 start PROG do footprint identify GEN teaching
 "Wu Xumang began to teach footprint identification in the 1950s"

Despite the differences discussed above, "there is a great deal of overlap between the two viewpoints" (Smith 1997: 271). Both *zai* and *-zhe* focus on the medial part of a situation, and they both present a situation as durative and continuous,²¹ though *zai* attaches more emphasis to its ongoing nature. As such, these two markers are sometimes interchangeable and can co-occur in the same sentence. Consider the attested example (40a) and its modification (40b):

- (40) a. *jizhe sicun-zhe zhe si-ge zi*
 journalist think-DUR these four-CLF character
 "The journalist was pondering over these four characters"
- b. *jizhe zai sicun zhe si-ge zi*
 journalist PROG think these four-CLF character
 "The journalist was pondering over these four characters"
- (41) *Jinliqi yizhi zai xinxin-kuku de zuo-zhe*
 Kingrich all-the-time PROG strenuously PRT do-DUR
yi-jian shi
 one-CLF thing
 "Kingrich has been working strenuously all along on one thing"

As the substitution test in (40) shows, when *-zhe* is affixed to a dynamic verb constellation (except posture and positional verbs) to indicate the continuance of a situation, there is not much difference between *-zhe* and *zai*, because it is quite plausible to consider a dynamic situation that continues to be ongoing and in progress. Example (18b), repeated here as (41), shows that *zai* and *-zhe* can actually co-occur in the same sentence to form the complex viewpoint of the progressive durative. While *zai* designates that the event is in progress, *-zhe* signifies the continuation of the progressive event (cf. also

Zhang 1995:137). These examples illustrate that there is a semantic connection between *zai* and *-zhe* and these two viewpoints may function complementarily even though they have their own focuses.

Having defined the progressive *zai* as an aspect marker, it is now necessary to discuss the interaction between the progressive aspect and situation types.

5.2.2 The interaction between the progressive aspect and situation types

As noted in section 5.2.1, the progressive aspect is sensitive to the aspectual feature of dynamicity, hence it is only compatible with non-stative situations. With the exception of ILSs, the progressive *zai* demonstrates varying degrees of compatibility with the other five basic situation types. Table 5.4 shows the distribution of 88 instances of the progressive *zai* found in the Weekly corpus. This section will examine the interaction of the progressive aspect with each situation type.

Table 5.4. Distribution of progressive *zai*

Corpus	SLS	ACT	SEM	ACC	ACH	Total
Training	2	64	2	6	3	77
Test	0	9	0	2	0	11
Total	2	73	2	8	3	88

Although the progressive may occur with some stative verbs when they denote stages of an individual (cf. section 3.3.3), the progressive *zai* is strictly incompatible with ILSs (cf. also Smith 1997:77, 271; Yang 1995; Li 1999; Zhang 1995:136). Affixation of *zai* to ILS verbs, as in **zai gao* ‘“is being tall”, **zai congming* ‘“is being clever”, **zai zhidao* ‘“is knowing”, is not felicitous, because the dynamicity of progressive viewpoints such as that represented by *zai* (see 5.2.5) conflicts with stative predicates (cf. Comrie 1976).

As noted in section 3.3.3, SLSs are “more event-like” and “more akin to things that happen” (Carlson 1977:448). As such, they are expected to take the progressive *zai*. This expectation is supported by our data. The situations of *shushui* ‘“be fast asleep” and *relian* ‘“be passionately in love” both refer to stages rather than personal dispositions of an individual, and are therefore SLSs. The Weekly corpus shows that they can both take *zai* felicitously. Our approach easily explains away Yang’s (1995:126) conundrum of why some states (e.g. *ni*

hai zai hen wo ma? “Do you still hate me?”, Yang 1995:126) are compatible with the progressive *zai*.

The felicitous co-occurrence of *zai* with activities is an unarguable fact (Smith 1997; Yang 1995; Li 1999; Kang 1999; He 1992). As can be seen from Table 5.4, the progressive *zai* is extensively used with this situation type. Here are some examples:

- (42) a. *ta zhengzheng yi-ge xingqi chi-bu-xia dongxi,*
 he whole one-CLF week eat-not-down thing,
yizhi zai ku
 all-the-time PROG cry
 “For a whole week, he couldn’t eat anything and was crying all of the time”
- b. *zhishengji zai kongzhong panxuan*
 helicopter in/PROG air-middle circle
 “The helicopter was circling in the air”
- c. *yuangong-men hai zai jibanjiadian de gongzuo*
 employees still PROG over-time PRT work
 “The employees were still working overtime”

As with the durative *-zhe*, semelfactives taking *zai* also produce iterative multiple event readings. For example:

- (43) *fating nei xiang-qi zhangsheng, fating wai*
 court inside loud-INC applause, court outside
de baixing ye zai guzhang
 GEN people also PROG applause
 “An applause broke out in the court, and people outside the court were also clapping their hands”

The semelfactive *guzhang* “to clap one’s hand, to applaud” is either [+bounded] or [–bounded] and can refer to a single clap of one’s hands or a series of claps. But when it takes *zai*, only the latter reading is plausible. Our approach here solves the problem of Li (1999) who can’t give an adequate explanation as to why “achievements” like *kesou* “cough” can take *zai* felicitously (e.g. *ta zai kesou* “He is coughing”, Li 1999).²²

Like activities, accomplishments are also expected to take *zai* (cf. Smith 1997; Yang 1995; He 1992; Li 1999). But as shown in Table 5.4, they do not occur as frequently with *zai* as activities because a quantified direct argument, which is typical of an accomplishment, “makes the interval introduced by the

verb bounded” (Verkuyl 1993:72) and imposes a final spatial endpoint on the situation. Yet endpoints are incompatible with the progressive aspect (see Figure 5.1). Consider the corpus example (44a) and its modification (44b):

- (44) a. *ta di-zhe tou xiang shi zai beisong yi-fen*
 he low-DUR head as-if is PROG recite one-CLF
huiguoshu
 repentance
 “He hung his head as if he was reciting a statement of repentance”
- b. **ta zai beisong san-fen huiguoshu*
 *he PROG recite three-CLF repentance
 *“He was reciting three statements of repentance”

(44a) is felicitous because the *yi* “one”, when pronounced with a neutral tone, has a *generic* reading (cf. Kang 1999:47). This means that the numeral-classifier compound *yi-fen* can be left out while keeping the meaning intact. (44b) is ill-formed, however, because of the imposed endpoint. Besides, real world knowledge tells us that it is virtually impossible for one to do certain things simultaneously. For example, you cannot possibly say the words *cat* and *dog* simultaneously. When the focus of an accomplishment sentence lies on the quantifier *per se*, however, the sentence does take *zai* on condition that there is no conflict with common sense knowledge:

- (45) *wo zhengzai xiang guowuyuan fupinban shenqing*
 I PROG to state-council aid-the-poor-office apply
5000-wan fupin daikuan, daoshou hou wo huochi-huocao
 50-million aid-poor loan, in-hand after I sooner-or-later
keyi huan ni na 400-wan
 able refund your that 4-million
 “I am applying to Aid-the-Poor Office of the State Council for a loan of 50 million yuan. When it is in my hands, I will be able refund your four million yuan sooner or later”

The interaction between *zai* and achievements is not as simple as has traditionally been assumed. Smith (1997:272), Yang (1995:127), Kang (1999:49) and Li (1999:224) assert that achievements never occur with *zai*. However, this is debatable. While it is true that most achievements are incompatible with the progressive,²³ some do take the progressive *zai* felicitously.

The situation type of achievement in Chinese is a complicated category. Achievements are basically of two types: simplex achievements (e.g. *si* “die”

and *ying* “win”) and complex achievements (e.g. *da-po* “hit-broken”). A complex type achievement is composed of an action verb that denotes a process and a completive, result-state or directional RVC that designates a result (cf. section 4.4.1). As simplex achievements only profile a result, they are strictly incompatible with *zai*, though their English equivalents can interact with the progressive to denote the preparatory process leading up to a culmination point. Complex achievements with completive RVCs (*wan/guo/hao* “completed, ready”) are incompatible with *zai* either, because they explicitly signal a final endpoint (cf. section 4.4.1). Therefore, the following sentences are ungrammatical:

- (46) a. **dan bujiu guoshu dou zai si*
 *but soon fruit-tree all PROG die
 “but soon fruit trees were all dying”
 b. **wo zai kan-wan zhe-pian xiaoshuo*
 *I PROG read-finish this-CLF story
 “I am finishing reading this story”

Complex achievements with result-state or directional RVCs normally do not take the progressive *zai*,²⁴ because the focus of an RVC compound is usually on the result, which implies completion and a final endpoint. Consider:

- (47) a. **ta zai zhaodao 8 nian qian de na-zhang zhengming*
 *he PROG find 8 year ago GEN that-CLF certificate
 *“He was finding the certificate of 8 years ago”
 b. **tamen zai sha-si 3 ren, sha-shang 21 ren*
 *they PROG kill-dead 3 person, kill-wounded 21 person
 *“They were killing 3 people and wounding 21 people”
 c. **ta fuqin zai yun-guoqu*
 *his father PROG faint-away
 “His father was fainting away”

The RVC compounds *zhaodao* “find”, *sha-si* “kill”, *sha-shang* “wound” and *yun-guoqu* “faint away” focus on the result in these sentences.²⁵ Since a result presupposes completion, a final endpoint is implied (cf. section 4.4.1). That is why they do not take *zai* felicitously. When the process components in RVC

compounds are focused and profiled, however, complex achievements with result-state and directional RVCs can indeed go well with *zai*. For example:

- (48) a. *women zhengzai da-ying zhe-chang*
 we PROG fight-win this-CLF
zhanzheng (Yang 1995:127)
 war
 “We are winning this war”
- b. *yi-pi you yuanjianzhuoshi de minying*
 one-group have far-sight GEN private
qiyejia-men zhengzai weici zuo-chu jianxin
 entrepreneurs PROG for-this make-out hard
de nuli
 GEN effort
 “A number of farsighted private entrepreneurs were making strenuous efforts to that end”

It can be seen from the above discussion that achievements of different types demonstrate different degrees of compatibility with the progressive aspect. While simplex achievements and complex achievements with completive RVCs are strictly incompatible with the progressive, those with result-state and directional RVCs show some tolerance to the progressive *zai*.²⁶

5.2.3 The progressiveness of *zai*

To signal the ongoing or progressive nature of a situation is a defining feature that distinguishes between *zai* and *-zhe* (cf. section 5.2.1). In addition to its canonical use to signal the ongoing nature of a situation, “the progressive in English has a number of other specific uses that do not seem to fit under the general definition of progressiveness” (Comrie 1976:37). These “specific uses” include its use to indicate habitual or iterative situations, to indicate anticipated happenings in the future, and some idiomatic use to add a greater emotive effect (see section 6.2). In Chinese, however, the progressive *zai* only corresponds to the canonical use of the English progressive, namely, to denote ongoing situations, whether they are real (49a), imagined (49b) or perceived (49c):

- (49) a. *xuduo ren zai wen [...]*
 many people PROG ask
 “Many people were asking [...]”

- b. *wen yi-ju zai relian zhong*
 ask one-CLF PROG passionate-love middle
de ni [...]
 GEN you
 “Let me ask you if you are passionately in love [...]”
- c. *li san-ceng wai san-ceng zhan-man-le*
 inner three-layer outer three-layer stand-full-ACTL
nianlao-nianshao de cunmin, sihu zai xiang
 old-and-young GEN villager, as-if PROG against
wo shiwei
 me show-force
 “The court was jammed by crowds of village people, old and young, as if they were putting on a show of force against me”

Zai focuses on the ongoing nature of a situation which is in progress at the speech time or some other reference time in the past or future. But whichever time serves as the observation point, *zai* always presents a situation as ongoing. This assumption is supported by all of the 88 situations taking *zai* found in the Weekly corpus.

5.2.4 The non-holisticity of *zai*

Like the durative aspect, *zai* only presents part of a situation (the medial span between t_1 and t_4 in Figure 5.1). This means that when a situation takes the progressive *zai*, its internal structure is decomposable into different parts which can be singled out for emphasis. The progressive *zai* makes reference to the internal structure of a situation and presents the situation from within. Syntactically, this non-holistic feature is mirrored by the incompatibility of *zai* with *for*-PPs or verbal classifier phrases, which function to bound a situation and attach a final temporal endpoint to the situation (cf. section 3.4.3). The following examples are ungrammatical:

- (50) a. **yuangong-men zai jibanjidian de gongzuo*
 *employees PROG over-time PRT work
yi-ge xiaoshi
 one-CLF hour
 *“The employees were working overtime for an hour”

- b. **fating wai de baixing ye*
 *court outside GEN people also
zai gu san-ci zhang
 PROG clap three-times hands
 *‘‘People outside the court were also clapping their hand three times’’

(50a-b) are modified on the basis of corpus examples in (42c) and (43). They can be made grammatical by removing the *for*-PP (50a) or verbal classifier phrase (50b), or simply replacing *zai* with *-le*.²⁷ But in the latter case, these situations would be presented in their entirety (cf. section 4.1.5).

5.2.5 The dynamicity of *zai*

As noted in section 5.2.1, one of the differences between *zai* and *-zhe* is their different behaviours in respect to the compatibility to the feature of dynamicity. While *-zhe* is available to both stative and dynamic situations (cf. section 5.1.3), *zai* only applies to non-stative situations (cf. section 5.2.2). As such, the progressive is a reliable test for dynamicity in Chinese (cf. section 3.2.1).

Dynamicity means change, which is in turn related to the initial endpoint (i.e. ingressive dynamicity, cf. section 4.1.3), the final endpoint (i.e. egressive dynamicity, cf. section 4.2.5), or the heterogeneous temporal structure of a situation. The dynamicity of the first two types is irrelevant to the progressive as an imperfective aspect. The dynamicity as demonstrated by *zai* lies in its ‘‘stage property’’ (Smith 1997:77). That is, the progressive aspect focuses on the heterogeneous progressive stages of an event. This feature is closely related to the locative meaning of *zai* (cf. section 5.2.1). Consider the follow examples:

- (51) a. *13-sui de nü xuesheng zai fangxue tu zhong*
 13-year GEN girl student on off-school way middle
bei daitu qiangbao
 PASS criminal rape
 ‘‘A 13-year old girl student was raped by a criminal on her way home from school’’
- b. *dan dangnian chuangye shi de jiqing*
 but those-years start-business when GEN enthusiasm
que zai xiaotui
 but PROG wane

“But the enthusiasm they had when starting a business in those days is now waning”

Zai has the function to localise a situation (cf. Zhang 1995:133). One’s way home from school can be conceptualised as consisting of successive parts (51a), and *zai* focuses on one of these parts. In this way, the raping event is localised, that is, it is related to a certain part on the way. For the same token, in (51b) the waning of their enthusiasm also consists of successive stages. Therefore they had less and less enthusiasm with each progressive stage of the waning event. Just as Smith (1997:77) observes, “The presence or absence of the stage property correctly distinguishes intervals focused with *zai* and *-zhe*.”

5.3. The inceptive aspect: *-qilai*

As noted in section 4.1.7, the COS *le* can function to indicate the inchoativeness of a new state. In this section, we will discuss the inceptive viewpoint marked by *-qilai*, which has a similar aspectual meaning. However, there are a number of differences between the two. Syntactically, the COS *le* is affixed to a sentence whereas *-qilai* is attached to a predicate verb or adjective. Semantically, the COS *le* focuses on a change of state by indicating the inchoativeness of a new state whereas *-qilai* merely signals the inception of an event. Furthermore, the COS *le* indicates CR (current relevance) whereas the inceptive *-qilai* does not. The aspect marker *-qilai* is characterised by the aspectual features of inceptiveness (section 5.3.3), non-holisticness (section 5.3.4), and dynamicity (5.3.5). Before these features are discussed, we will first define the meaning scope of *-qilai* when it is used as an aspect marker (5.3.1) and examine the interaction between the inceptive aspect and situation types (section 5.3.2).

5.3.1 *-Qilai* as an aspect marker

Morphological forms expressing aspectual meanings in Chinese developed at different stages of evolution of the language and this development is still under way (cf. Dai 1997:94).²⁸ Those that developed earlier, such as *-zhe*, *-le* and *-guo*, have been fully grammaticalised and have become dedicated aspect markers.²⁹ Some others, though they have gradually begun to denote aspectual meanings, still keep their lexical meanings to a great extent.³⁰ *-Qilai* and *-xiaqu* (see section 5.4) belong to this latter category.³¹

In modern Chinese, *-qilai* is loaded with at least four meanings:³² (1) it is a directional verb indicating an upward movement; (2) it is a resultative complement indicating the result of an event; (3) it is a verb complement indicating the completeness or effectiveness of an action, meaning “in terms of”; and (4) it is an aspect marker signalling the inceptiveness of a situation.³³ These four meanings are all found in the Weekly corpus, as shown in Table 5.5.

Table 5.5. Meanings of *-qilai*

Corpus	Directional	Resultative	Complete/ effective	Inceptive	Total
Training	5	7	3	18	33
Test	0	2	0	2	4
Total	5	9	3	20	37

The following are some examples:

- (52) a. *Lu Zhensheng jidong de zhanli-qilai* (directional)
Lu Zhensheng excitedly PRT stand-up
“Lu Zhensheng stood up excitedly”
- b. *yuefa ba ziji de ganqing baoguo-qilai* (resultative)
more BA self GEN feeling wrap-up
“(she) hid her feelings up all the more”
- c. *guina-qilai, you yi yixia manxing jibing*
sum-up, still with following chronic disease
wei duojian (completeness/effectiveness)
are common
“To sum up, the following chronic diseases are more common”
- d. *zuo zai ta shenbian de Liu Xiaoqing*
sit at he beside GEN Liu Xiaoqing
hahadaxiao-qilai (inceptive)
laugh-heartily-INC
“Liu Xiaoqing, who sat beside him, started to laugh heartily”

Previous studies on aspect in Chinese are either too narrow in scope as they totally overlook the aspectual meaning of *-qilai* (e.g. Li & Thompson 1981; Gao 1948) or too broad in scope as they conflate its resultativeness and

completeness/effectiveness meanings with its inceptiveness meaning (e.g. Henne et al. 1977:131–133; Kang 1999:223–243). Those who recognise the inceptive value of *-qilai* treat this marker differently than other analysts. For example, Chao (1968) and Dai (1997) regard *-qilai* as a viewpoint aspect maker whereas Smith (1997) and Yang (1995) argue that *-qilai* marks the focused point of a situation. Therefore Smith and Yang treat *-qilai* as a situation aspect marker rather than a viewpoint aspect marker.

This latter view, nevertheless, is problematic. On the one hand, it is true that *-qilai* focuses on the starting point of a situation as Smith and Yang claim. But it is this marked focus that justifies *-qilai* as a viewpoint aspect marker, because the basic function of a viewpoint aspect is just like a camera lens focusing on the whole or part of a situation (Smith 1988:230, 1997). On the other hand, just as Yang (1995:107–112) observes, “a non-stative sentence has to be [aspectually] marked to have a specific reading” (cf. section 4.1.3), otherwise non-statives “only have habitual or generic readings” (cf. also Smith 1997: 276). The aspect marking mentioned by Yang must refer to viewpoint aspect. The corpus certainly supports the view that *-qilai* is a viewpoint aspect marker, because 11 out of the 15 instances of non-statives taking *-qilai* found in the Weekly corpus do not have any other aspect marker but they have specific closed readings. Yet Yang (1995:103) actually argues against *-qilai* as a viewpoint aspect marker pointing to the compatibility of *-qilai* with both *-le* and *zai*. However this is insufficient as an argument as complex viewpoint aspect is not an uncommon linguistic phenomenon. In English, for example, the perfect goes well with the progressive to form the hierarchically structured complex aspect of the perfect progressive (see chapter 6). Therefore we claim that *-qilai* is indeed a viewpoint aspect marker, though it should be kept in mind that *-qilai* functions as an aspect marker only when it signals inceptiveness.

As *-qilai* is historically a compound directional RVC consisting of *qi* “rise” and *lai* “come”, when the inceptive *-qilai* is affixed to a transitive verb, an object NP tends to separate these two morphemes, as in *chang-qi ge lai* “start to sing”.³⁴ When this occurs, the inceptive meaning denoted by *-qilai* remains unchanged. Henne et al. (1977:133) argue that “[t]he splitting of *qilai* by an object (verb+*qi*+object+*lai*) is a typical complement pattern” and thus should be excluded as an aspect suffix.³⁵ Kang (1999:285) also argues that in this pattern, *qi* is a directional complement and *lai* is an imperfective aspect marker that “presents the event as ongoing at a particular reference time.” The

validity of the arguments made by the above two authors, nevertheless, is debatable, because, as the corpus data shows, the split form is the only acceptable form when *-qilai* co-occurs with an object NP to indicate inceptiveness (cf. also Tiee 1986:92).

5.3.2 The interaction between the inceptive aspect and situation types

The inceptive *-qilai* indicates that a situation has started and will continue for some time. As such, the inceptive aspect is sensitive to the aspectual feature of durativity. That is, *-qilai* can only be affixed to durative situations felicitously (cf. Smith 1997:295). There are 21 instances of inceptive *-qilai* in the Weekly corpus. Their distribution is summarised in Table 5.6.

Table 5.6. Distribution of the inceptive *-qilai*

Corpus	ILS	SLS	ACT	SEM	ACC	Total
Training	4	2	11	1	1	19
Test	2	0	0	0	0	2
Total	6	2	11	1	1	21

The table shows that the inceptive aspect goes well with stative situations (ILSs and SLSs), though *-qilai* occurs with activities more frequently.

As the inceptive aspect is not sensitive to dynamicity, ILSs group with SLSs in their interaction with *-qilai*. States are inherently durative, they are therefore compatible with *-qilai* at the core level. It should be noted, however, that at the clause level, a stative situation presented with the inceptive viewpoint always demonstrates the feature of ingressive dynamicity. Consider the following examples:

- (53) a. *xiaoshuo neirong zai ta jinru qingchunqi hou*
 story content in he enter puberty after
biande xinggan-qilai
 become sexy-INC
 “His stories became sexy when he reached puberty”
- b. *Wu Xumang sihu diyi-ci chouchu-qilai*
 Wu Xumang as-if 1st-time hesitate-INC
 “It seemed that Wu Xumang became hesitant for the first time”

The quality of *xinggan* “be sexy” is an ILS verb predicated of his stories in (53a), while the stage-level predicate *chouchu* “be hesitant” describes a stage of the subject in (53b). States of these two types both occur with the inceptive aspect felicitously. However, when *-qilai* is affixed to them, these sentences no longer convey purely stative situations. Rather they present inceptive points at which the states denoted by the predicates start to obtain. This means that *-qilai* functions to coerce a stative situation into a dynamic one at the clause level (cf. also section 5.3.5).

As Table 5.6 shows, activities occur with *-qilai* most naturally. This is because this situation type is intrinsically durative and dynamic, features which are fully compatible with the inceptive aspect. Here are some examples:

- (54) a. *Yao laoban de dianhuaaji jizhou de*
 Yao proprietor GEN telephone suddenly PRT
xiang-le-qilai
 ring-ACTL-INC
 “All of a sudden, Yao’s telephone started to ring”
- b. *shuo-zhe haiziqi de xiao-qilai*
 say-DUR childish PRT laugh-INC
 “Having said that, (she) started to laugh like a child”

In these sentences, *dianhuaaji xiang* “telephone ringing” and *ta xiao* “her laughing” are both durative situations which can extend in both directions on a time axis. But when they are presented with the inceptive viewpoint, these situations can only extend forwards from their inceptive points. Activities taking *-qilai* also behave differently from the case of states, though both situation types are dynamic at the clause level. As noted in section 5.3.2, the dynamicity of states taking *-qilai* at the clause level is only related to inceptive points. In contrast, the dynamicity of activities taking *-qilai* is related to both inceptive points and heterogeneous temporal structures.

Just like other imperfective markers, *-qilai* interacting with semelfactives only produces iterative multiple event readings. Semelfactives denoting single punctual events are incompatible with *-qilai*. Consider the attested example (55a) and its modification (55b):

- (55) a. *you da-qi wo lai*
 again beat-INC1 me INC2
 “(they) started to beat me again”

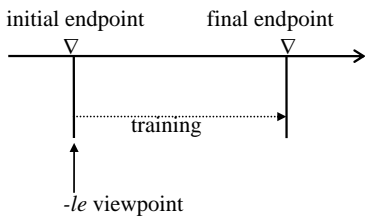
- b. **you da-qi wo yi-xia lai*
 *again beat-INC1 me one-CLF INC2
 *“(they) started to beat me once again”

Semelfactives are inherently [-durative], but their [\pm bounded] feature allows them to shift readily between single event and multiple event readings (cf. section 3.3.1). That is why situations of this type can take *-qilai* felicitously. While a semelfactive by itself may denote a series of punctual events, it necessarily does exactly that when it takes *-qilai* (or any other imperfective marker). As shown by the ungrammatical example in (55b), semelfactives with a single event reading are incompatible with *-qilai*.

Accomplishments can occur with *-qilai* felicitously, but far less frequently than activities, as shown in Table 5.6. This is because an accomplishment has a final spatial endpoint, which can only be made visible with a perfective viewpoint. As such, accomplishments are more likely to take a perfective marker. Consider the corpus example (56a) and its modified alternative (56b):

- (56) a. *Li Hailong bian jingxin “peiyang”-qi zhe-ge*
 Li Hailong then with-care train-INC1 this-CLF
tudi lai-le
 apprentice INC2-ACTL
 “Then Li Hailong started to ‘train’ this apprentice with the best of care”
- b. *Li Hailong bian jingxin “peiyang”-le zhe-ge*
 Li Hailong then with-care train-ACTL this-CLF
tudi
 apprentice
 “Then Li Hailong ‘trained’ this apprentice with the best of care”

(5.4a): Temporal structure of (56a):



(5.4b): Temporal structure of (56b):

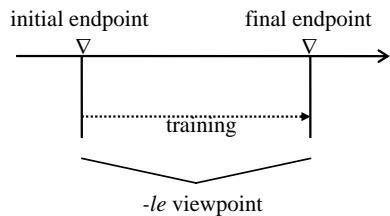


Figure 5.4. Comparison of the actual aspect and the actual inceptive aspect

In the above sentences, *peiyang zhe-ge tudi* “train this apprentice” has a well-defined final spatial endpoint. The training event culminated when the apprenticeship was over. A careful comparison of (56a) and (56b) reveals the difference between the two. Although these two sentences both take *-le*, the focuses of this perfective marker are different. In (56a) the focus of *-le* is on the inceptive point (see Figure 5.4a) whereas in (56b) its focus is on the whole situation (see Figure 5.4b). This difference accentuates their different readings. Specifically, the first sentence indicates that the inception of the accomplishment was actualised but says nothing about the achievement of the final spatial endpoint, whereas the second indicates that the accomplishment *per se* was actualised, thus meaning that its final spatial endpoint was achieved.

Kang (1999:250) argues that accomplishments interacting with *-qilai* usually indicate the “attainment of goal and its resultant state”, as in *ba hua gua-qilai* “hung up the picture”. On close examination, however, it will not be hard to find that *-qilai* in this context is a directional RVC indicating resultativeness (see section 5.3.1; cf. also Chen 1994).³⁶

In Figure (5.4a), it is also clear that the complex viewpoint of the ‘actual inceptive aspect’ is hierarchically arranged (cf. also Dai 1997:100–101). The situation is first presented with the inceptive viewpoint, that is, the initial endpoint (i.e. inceptive point) is taken in focus. As an inceptive point is a temporal point that easily stands on its own, it can be considered as a relatively complete part and further presented with the actual viewpoint. This hierarchical relation cannot be reversed, that is why **peiyang-le zhe-ge tudi -qilai* is unacceptable. Therefore, when an object NP separates *qi* and *lai*, *-le* can only appear at the end of a sentence, though with an intransitive verb or an adjectival predicate, *-le* can occur immediately after the predicate (as in *xiao-le-qilai* “started to laugh”) or after *-qilai* at the end of the sentence (as in *xiao-qilai-le* “started to laugh”).

As achievements are [–durative] situations that encode a result, they cannot be iterated like semelfactives. That accounts for their strict incompatibility with the inceptive aspect. The claim of incompatibility is supported by the Weekly corpus, where no instance of achievement is found to occur with *-qilai*. Achievements, whether they take simplex form (57a), or complex forms with completive RVCs (57b), result-state RVCs (57c) or directional RVCs (57d), are all ill formed with *-qilai*:

- (57) a. **dan bujiu guoshu dou si-qilai*
 *but soon fruit-tree all die-INC
 “but soon fruit trees all started to die”
- b. **wo kan-wan-qilai zhe-pian xiaoshuo*
 *I read-finish-INC this-CLF story
 “I started to finish reading this story”
- c. **jiang na suo-zhu de gongwenbao jian-kai-qilai*
 *BA that lock-up GEN briefcase cut-open-INC
 “(He) started to cut that locked briefcase open”
- d. **jiu dang-shang-qi pingwei lai -le*
 *then be-succeed-INC1 judge INC2-ACTL
 “so (he) started to succeed in becoming a judge of the competition”

5.3.3 The inceptiveness of *-qilai*

Indicating inceptiveness is a defining feature that distinguishes the viewpoint marked by *-qilai* from that marked by *-zhe*. Inceptiveness means a situation has started and will continue. The situation may or may not have an inherent final spatial endpoint, but that is not the object of concern to the inceptive viewpoint, because even if a situation has one, the final endpoint is not in the focus of *-qilai*. This is a common feature of *-zhe* and *-qilai*. These two viewpoints differ in that the situation taking *-zhe* can extend either backwards or forwards from the observation point on a time axis, whereas the situation taking *-qilai* can only extend forwards from the inceptive point. Simplifying Figure 5.1 by comparing only these two viewpoints, we get Figure 5.5.

In the figure, t_1 and t_3 respectively stand for the initial and final endpoints of a situation while t_2 is an indefinite internal temporal point (the observation point), because a situation can be observed at any internal point between t_1 and t_3 (both endpoints not included). As the figure shows, the durative *-zhe*

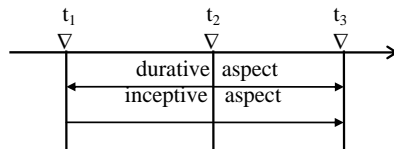


Figure 5.5. Comparison of *-qilai* and *-zhe*

focuses on t_2 and the parts preceding and following it (but excludes both endpoints t_1 and t_3), because t_2 is an indefinite point that can move backwards and forwards between the two endpoints (as indicated by the double arrow). In contrast, the inceptive aspect focuses on the initial endpoint t_1 (i.e. the inceptive point) and the part that follows this point (as indicated by the right arrow). This means the span of *-qilai* is unidirectional as it can only extend forwards.

Consider the following examples:

- (58) a. *Mao Zedong xiao-zhe dui ta shuo [...]*
 Mao Zedong smile-DUR to him say
 “Smiling, Mao Zedong said to him [...]”
- b. *shuo-zhe haiziqi de xiao-qilai*
 say-DUR childish PRT laugh-INC
 “Having said that, (she) started to laugh like a child”

The same event *xiao* “smile, laugh” is presented with different viewpoints in these two sentences. In (58a), *-zhe* only presents the event as durative but provides no information as to when the event started. We only know that it started before the observation was made (i.e. t_2) and that it would endure for some time after that. That is, the initial endpoint is implicated. In (58b), however, we can clearly identify an inceptive point, which is made explicit by *-qilai*. Furthermore, because *-qilai* is only compatible with durative situations, we know that the event has started and will continue for some time.

5.3.4 The non-holisticity of *-qilai*

As can be seen from Figure 5.5 above, *-qilai* only focuses on part of a situation (i.e. its initial endpoint). This means that a situation presented by the inceptive aspect is decomposable semantically and that *-qilai* makes reference to the internal temporal structure of a situation and presents the situation from within.

Kang (1999:224–225) claims that the viewpoint marked by *-qilai* is both perfective and imperfective in nature:

Since *-qilai* means “to start to” and it refers to the initial end of a situation, it is considered “perfective”. However, *-qilai* is not a perfective aspect particle, as its effect is not always to place a temporal limit on the situation it views, nor does it lend a perfective reading to the sentence. On the contrary, the situation presented by *-qilai* has no right-hand time boundary. So it is

unspecified as to its duration or completion. In this sense, it is aspectually imperfective, too.

This claim, nevertheless, is problematic. On the one hand, it is self-contradictory to treat the same suffix as a perfective marker and an imperfective marker simultaneously.³⁷ On the other hand, Kang's (1999) use of the concept of perfectivity is confused. The first half of Kang's (1999) claim cited above is based on Freed (1979:14), who maintains that "the temporal boundary implied by the perfective is viewed as an internal limit to the action; thus, 'beginning' an action is perfective." At the same time, Freed (1979:14) also makes clear that the perfective/imperfective distinction in her model corresponds to the opposition between temporally bounded vs. temporally unbounded situations. As noted in section 5.3.2, an inceptive point is punctual and can be considered as a relatively complete part on its own. Freed's idea of the perfective/imperfective distinction is clearly a departure from the definition proposed by Comrie (1976). It is not a problem for different people to have different ideas of what perfectivity and imperfectivity mean (see section 2.4). What is problematic is that Kang (1999) is inconsistent in her use of these two terms. In following Freed's (1979:14) ideas of perfective/imperfective distinction, Kang contradicts her own claim that Comrie's (1976) definition was adopted in her thesis (Kang 1999:7). According to Comrie (1976: 18–20), the perfective presents a situation as a single unanalyzable whole, with the beginning, middle and end rolled into one. By this definition, *-qilai*, which only focuses on the initial part of a situation, can in no sense be considered as perfective.

5.3.5 The dynamicity of *-qilai*

The medial part of a situation may or may not involve change, but its beginning or end always involves change. *-Qilai* reflects the inceptive change related to the beginning of a situation. Therefore, the inceptive aspect demonstrates the feature of ingressive dynamicity (cf. section 5.1.3).

As noted in section 5.3.2, *-qilai* can interact with either statives or non-statives at the core level. The dynamic feature of the inceptive aspect is most clearly illustrated by its function to coerce a stative situation into a dynamic one at the clause level. Consider the corpus example (59a) and its modified alternative (59b):³⁸

- (59) a. *ta jian wo taidu turan ying-le-qilai [...]*
 he see my attitude suddenly hard-ACTL-INC
 “When he realised that my stand suddenly became uncompromising [...]”
- b. *ta jian wo taidu hen ying [...]*
 he see my attitude very hard
 “When he realised that my stand was uncompromising [...]”

It is clear that (59a) is dynamic whereas (59b) is stative. As the only difference between these two sentences is the presence or absence of *-qilai*, it is plausible to assume that the dynamic feature of (59a) is attributable to the inceptive aspect. On the other hand, the dynamicity of the inceptive aspect is also reflected by the fact that *-qilai* affixed to a “gradable adjective” (Kang 1999: 231) usually implies an intensification of the quality denoted by the adjective. Consider the following examples:

- (60) a. *Xinxian jinnianlai guang kai chayuan,*
 Xin-county recently extensive open tea-plantation
waixiao shanhuo fu-qilai le
 export mountain-product rich-INC COS
 “In recent years, Xinxian County has got rich by extensive tea plantation and exportation of mountain products”
- b. *Li Ming zhengzai dui xin huanjing*
 Li Ming PROG to new environment
shiying-qilai (Yang 1995: 103)
 get-used-INC
 “Li Ming is beginning to get used to the new environment”

In (60a), *-qilai* not only signals the inception of the event of *getting rich*, but it also gives an implication of *getting richer and richer*, an intensifying process of the quality introduced by the adjective. This implication of intensification can be explained as follows. As noted in section 5.3.1, *-qilai* as a directional RVC indicates an upward movement. This means that the ending point of the movement is “higher than” its starting point. In more general terms, this locative “higher than” meaning can be converted into an abstract “more than” meaning (cf. Lipka 1972; Kang 1999: 231). In combination with the gradable feature of adjectives, *-qilai* implies that the successive stage following the inceptive point is an intensifying process. For the same reason, the intensifying implication also applies to ILS verbs like *shiying* “be used to”, as in (60b).

Note that the situation in this sentence is presented with the complex viewpoint of the ‘progressive inceptive’. ILS verbs do not normally take the progressive felicitously (cf. section 3.2.1). But when these verbs take the inceptive marker *-qilai*, the stative situations are coerced into events at the clause level, thus the progressive is acceptable.

5.4. The continuative aspect: *-xiaqu*

As can be seen from Figure 5.1 at the beginning of this chapter, the continuative viewpoint presupposes the prior initiation of a situation (as indicated by the dotted line before the resumptive point t_3 in the figure) and focuses on the resumptive point and its continuative stage. As reference is made to the internal structure of a situation, the continuative aspect is considered to be imperfective in nature. In this section, we will first define the meaning scope of *-xiaqu* when it functions as an aspect marker (section 5.4.1) and examine the interaction between *-xiaqu* and situation types (section 5.4.2). Then we will discuss three salient features of the marker *-xiaqu*, namely, continuativeness (section 5.4.3), non-holisticity (section 5.4.4) and dynamicity (section 5.4.5).

5.4.1 *-Xiaqu* as an aspect marker

Like the inceptive *-qilai*, *-xiaqu* is not a fully-fledged aspect marker. Basically, the lexical meaning of *-xiaqu* is spatially defined. In modern Chinese, this lexeme may function as a main verb (61a) and an RVC indicating spatial direction (61b) or resultativeness (61c). When it was gradually generalised to map a spatially downward movement onto the temporal domain, *-xiaqu* started to function as an aspect marker (61d).³⁹

- (61) a. *wo xian xiaqu dating-dating zai shuo* (main verb)
 I first get-off enquire-enquire then say
 “Let me get off (the car) and ask about it first before taking action”
- b. *zhiyao yi kaiche, wo jiù cong loushang*
 if once start-car, I then from upstairs
tiao-xiaqu (RVC)
 jump-down
 “If you start the car, I will jump down from upstairs”

- c. *juzhang bei che-xiaqu le* (Chen 1994) (RVC)
bureau-chief PASS dismiss-down COS
“The bureau chief was dismissed from his post”
- d. *ruguo rang zhe-zhong shitai*
if let this-kind situation
fazhan-xiaqu [...] (continuative marker)
develop-CONT
“If this situation is let to continue developing [...]”

Table 5.7. Meanings of *-xiaqu*

Function	Main verb	RVC (directional)	RVC (resultative)	Aspect marker	Total
Frequency	1	2	0	8	11

Traditionally, the continuative *-xiaqu* has been considered as a compound aspect verb (e.g. Zhang 1995:151) or a ‘super-lexical morpheme’ (i.e. a partially grammaticalised morpheme; e.g. Smith 1997:295; Yang 1995:103). We agree with Chao (1968), Dai (1997) and Kang (1999) that *-xiaqu* is indeed a continuative aspect marker,⁴⁰ because it denotes the continuative meaning much more frequently than its other meanings, as can be seen from Table 5.7. When *-xiaqu* functions as an aspect marker, it is only temporally defined, with a meaning of “to continue, to go on”.

5.4.2 The interaction between the continuative aspect and situation types

Like the inceptive aspect, *-xiaqu* is sensitive to the feature of durativity. This means that *-xiaqu* can only be affixed to durative verbs, though semelfactives can also take *-xiaqu* when they denote multiple events. This section is concerned with the interaction between *-xiaqu* and situation aspect. The distribution of the eight instances of the continuative *-xiaqu* is given in Table 5.8.⁴¹

Table 5.8. Distribution of the continuative *-xiaqu*

Situation	ILS	SLS	ACT	SEM	ACC	ACH	Total
Frequency	0	1	6	0	1	0	8

ILSs describe more permanent dispositions of an individual that do not change over time and space (cf. section 3.3.3). This feature is incompatible with the focus of the continuative viewpoint (see section 5.4.1). Therefore, in a strict sense, situations of this type do not take the continuative *-xiaqu* felicitously. Expressions like **zhidao-xiaqu* *‘‘continue knowing’’, **shuyu-xiaqu* *‘‘continue to belong to’’, or **congming-xiaqu* *‘‘continue to be clever’’ are all expected to be ill-formed. Although it is felicitous to say *shou-xiaqu* ‘‘to get slimmer’’, *-xiaqu* in this context is nevertheless more likely to be an RVC indicating resultativeness (‘‘to get slimmer’’) rather than a continuative aspect marker indicating continuativeness (‘‘to go on getting slimmer’’). As such, the expression ?*pang-xiaqu* ‘‘to go on getting fat’’ sounds less natural than *shou-xiaqu* ‘‘to get slimmer’’.⁴² Our observation is supported by the corpus data, where no instance of ILS taking *-xiaqu* was found (see Table 5.8).

SLSs are related to stages of an individual, which are more temporary in nature (cf. section 3.3.3). This feature allows for a resumptive point to be taken into the focus of the continuative viewpoint. Therefore, SLSs can take *-xiaqu* felicitously. For example:

- (62) *nandao shijian ye zai shuailao-xiaqu ma*
 how-can-it-be time also PROG age-CONT PRT
 ‘‘How can it be possible that time is also aging?’’

This sentence is presented with the complex viewpoint of the continuative *-xiaqu* and the progressive *zai* – the ‘progressive continuative aspect’. The SLS *shuailao* ‘be aged’ is first presented with *-xiaqu* to emphasise its continuation and intensification. As *-xiaqu* functions to coerce a stative situation into a dynamic one at the clause level (see section 5.4.5), the state of *being aged* is turned into an *aging* event with successive stages. This event is further presented with the progressive to focus on its going nature. These two viewpoints are structured hierarchically.

Adjectival verbs (i.e. quality verbs) that describe stages of an individual are often found to occur with *-xiaqu*. In this case, *-xiaqu* not only signals continuation but indicates an intensifying process as well (cf. also Kang 1999:247). Consider the following examples:

- (63) a. *kanlai tianqi hai hui leng-xiaqu* (CED 1997)
 apparently weather even will cold-CONT
 “It seems that it will get even colder”
- b. *tianse jianjian an-xiaqu* (Kang 1999:247)
 sky gradually dark-CONT
 “It gradually became dark”

On the one hand, *-xiaqu* in these sentences indicates that the situations of *being cold* (63a) and *being dark* (63b) began to obtain some time ago and would continue for some time. This is the basic aspectual meaning of *-xiaqu* (cf. section 5.4.1). On the other hand, *-xiaqu* interacting with adjectival verbs also implies an intensification of the qualities introduced by these adjectives (see section 5.4.5). This intensifying feature of *-xiaqu* is in line with adverbials of manner such as *jianjian* “gradually” and *yitiantian* “day by day”.

When *-xiaqu* interacts with statives, the sense of interruption that might occur with a dynamic situation (see section 5.4.3) is absent (cf. Kang 1999:247), because statives are non-stop by nature and do not allow the insertion of other events. Therefore, the following sentence is unacceptable:

- (64) **jintian tianqi nuanhe yidian le, dan kanlai hai*
 *today weather warm a-bit COS, but apparently even
hui leng-xiaqu
 will cold-CONT
 “It is a bit warmer today, but it seems that it will get even colder”

Like the inceptive aspect, *-xiaqu* occurs most naturally with activities, as can be seen from Table 5.8 (cf. also Kang 1999:245). This is because [+durative] and [+dynamic] are common features shared by the situation type of activity and the viewpoint of *-xiaqu*. Here are some examples:

- (65) a. *yi chang-dao tiantou de qiye juexin*
 already taste-succeed benefit GEN business determined
jixu chang-xiaqu
 continue taste-CONT
 “Businesses that have tasted its benefits are determined to continue to taste them”
- b. *juebu neng [...] ren qi qipian-xiaqu*
 never can let it deceive-CONT
 “(we) should not let it continue to deceive people”

In these examples, the situations of *chang* “to taste” and *qipian* “to deceive” are both activities. The continuative aspect presents these activities from a certain internal point (i.e. the resumptive point) and indicates that they will continue from that point for some time. This feature of *-xiaqu* is similar to the inceptive *-qilai*, because both viewpoints present situations as extending forwards from an observation point. It is interesting to note that as *-qilai* can occur with *kaishi* “start” to emphasise the inceptive point, *-xiaqu* can also occur with *jixu* “continue” to emphasise the resumptive point (as in 65a). But the difference between the two viewpoints is also sufficiently clear: the focus of *-xiaqu* falls on a resumptive point within a situation whereas *-qilai* focuses on the inceptive endpoint of a situation.

Activities presented with *-xiaqu* may or may not be interrupted before they continue. This is different from SLSs, which can only be continuous without interruption. Examples in (65) are uninterrupted activities. There are also contexts in which activities may be interrupted before they continue. For example:

- (66) *Wang Hu kan-le lianzhang yi-yan, you*
 Wang Hu look-CTL company-commander one-CLF, then
shuo-le-xiaqu (Dai 1997:104)
 say-CTL-CONT
 “Wang Hu took a look at the company commander, and then went on talking”

In this context, the event of Wang Hu’s talking was interrupted by another event (his looking at the company commander) before the talking event went on. But no matter whether an event is interrupted, the continuative *-xiaqu* is only concerned with the resumptive point and its continuative stage while disregarding its anterior stage (see section 5.4.3). Example (66) also shows that the continuative aspect, like the inceptive *-qilai*, can occur with *-le* to form the complex viewpoint of the ‘actual continuative aspect’. As a resumptive point, like an inceptive point, has a point-like feature and can be considered as a relatively complete part on its own, it can be singled out for presentation with the perfective. Semantically, these two viewpoints are also arranged hierarchically in the complex viewpoint (cf. section 5.3.2).

No instance of a semelfactive taking *-xiaqu* was found in the Weekly corpus. Considering that the semelfactive is a relatively infrequent situation type, and that the continuative viewpoint occurs only rarely, it is hardly surprising

that there are no examples of the combination of the two infrequent features in a moderately sized corpus like the Weekly corpus. However, the absence of such a combination in this corpus does not mean that a semelfactive cannot take the continuative aspect. As semelfactives are conceptually [\pm bounded] and easily override their temporal boundary, they can behave in a way similar to activities when they indicate iterative readings (cf. section 3.3.1). It should be noted, however, that situations of this type automatically produce iterative multiple event readings when they take the continuative *-xiaqu* (e.g. 67a). A semelfactive that explicitly denotes a single event is incompatible with *-xiaqu* (e.g. 67b).

- (67) a. *bie qiao-xiaqu le. hen xianran,*
 not knock-CONT COS. very clear,
dalou li meiyou ren (Kang 1999:248)
 building inside no person
 “Don’t continue to knock. Obviously, there is nobody in the building”
- b. **ta qiao-xiaqu yi-ci men*
 *he knock-CONT one-CLF door
 *“He continued to knock at the door once”

An accomplishment is a durative and dynamic situation with a natural final spatial endpoint. Situations of this type are compatible with the continuative viewpoint. However, like all other imperfectives, *-xiaqu* does not take a final endpoint, whether natural or arbitrary, spatial or temporal, into its focus. Therefore *-xiaqu* interacting with accomplishments does not provide information as to whether their final spatial endpoints are achieved. Consider the following example:

- (68) *tamen guli Liu Qiuhai jianchi jiang zhe-chang*
 they encourage Liu Qiuhai persevere BA this-CLF
guansi da-xiaqu
 lawsuit carry-CONT
 “They encouraged Liu Qiuhai to persevere in the lawsuit”

Because a lawsuit has an inherent final spatial endpoint, whether winning or losing, *da zhe-chang guansi* “to engage in the lawsuit” in (68) is an accomplishment. However, when it is presented with the continuative aspect, we only know that the lawsuit has been initiated and will continue. We will by no means know the outcome of the lawsuit, because its final endpoint is beyond the focus of the continuative aspect.

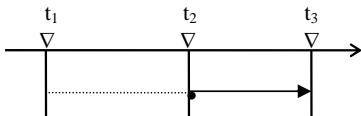
Achievements are intrinsically [-durative], and they cannot be iterated like semelfactives because of their [+result] feature. As such, achievements are strictly incompatible with *-xiaqu* which has a continuative aspectual meaning (cf. Kang 1999: 249). This claim of incompatibility is supported by our corpus data. Expressions like **si-xiaqu* *‘‘continue to die’’ (simplex achievement), **xie-wan-xiaqu* *‘‘continue to finish writing’’ (achievement with a completive RVC), **jian-kai-xiaqu* *‘‘continue to cut open’’ (achievement with a result-state RVC) and **chuan-shang-xiaqu* ‘‘continue to put on’’ (achievement with a directional RVC) are all ill-formed.

5.4.3 The continuativeness of *-xiaqu*

The continuative aspect splits a situation into two parts. The splitting point is the resumptive point (but not necessarily the middle point). These two parts can be considered as two separate situations that are semantically related (cf. Dai 1997: 103). Therefore they can be adjoined (as in 65 and 68) or separated by a third situation (as in 66).⁴³ Figure 5.6 illustrates this difference.

Figure (5.6a) illustrates how the continuative aspect presents an uninterrupted situation. In the figure, t_1 and t_3 represent the initial and final endpoints of a situation, which is split at a definite internal point t_2 (the resumptive point). Continuateness means that the situation will continue after the observation point t_2 , but does not indicate whether the situation will actually reach its final endpoint (if it has one). Nor is the part prior to t_2 (marked by the dotted line) of concern to the continuative aspect. Figure (5.6b) shows how the continuative aspect presents an interrupted situation. In the figure, t_1 and t_4 stand for two endpoints of a situation. The situation comes to a stop at t_2 , where a second situation (marked by XXX) incepts and lasts till t_3 . Then the first situation resumes from t_3 . In this case, the resumptive point is t_3 . The continuative *-xiaqu* signals that the first situation will continue from this resumptive point (t_3) but does not indicate whether it will reach its final

(5.6a): Uninterrupted situation



(5.6b): Interrupted situation

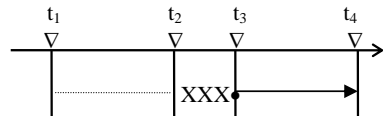


Figure 5.6. Continuateness of the continuative aspect

endpoint (if it has one).⁴⁴ The part anterior to the t_3 (including the inserted situation) is not the object of concern to *-xiaqu*.

As noted in Kang (1999:245), a situation may sometimes “consist of a stop-and-start progression of a series of self-contained events.” That is, there are interruptions between occurrences of self-contained events. Consider:

- (69) *jianchi duanlian-xiaqu, ni de shenti jiu hui*
persevere practise-CONT, you GEN health then will
hao-qilai (Kang 1999:245)
good-INC
“If you persevere in doing physical exercise, your health will improve”

In this context, *duanlian* “do physical exercise” has a generic or series reading and cannot be understood as non-stop, because one has to eat, sleep, and perform other acts in addition to doing physical exercise. But as each event in the series is self-contained, the series as a whole can be considered as an uninterrupted situation.

5.4.4 The non-holisticity of *-xiaqu*

As can be seen from Figure 5.6 above, the continuative aspect decomposes a situation and focuses only on its continuative part while excluding its anterior part and final endpoint. As such, the continuative viewpoint makes explicit reference to the internal structure of a situation and presents the situation as decomposable and imperfective. Furthermore, as *-xiaqu* indicates that a situation will “continue into an indefinite future” (Tiee 1986:95), situations presented with this viewpoint are open-ended. This lends further evidence that *-xiaqu* is characterised by the feature of non-holisticity and imperfectivity. Because of its indefiniteness, *-xiaqu* cannot occur with delimiting devices. Compare the corpus example (70a) and its modification (70b):

- (70) a. *xingxun yanxu-le san-ge xiaoshi*
torture-inquisition continue-ACTL three-CLF hour
“The inquisition by torture lasted for 3 hours”
b. **xingxun yanxu-xiaqu san-ge xiaoshi*
* torture-inquisition continue-CONT three-CLF hour
“The inquisition by torture lasted for 3 hours”

The first sentence taking the actual *-le* can be delimited by a *for*-PP. But when

-le is replaced with *-xiaqu*, the sentence becomes unacceptable, because the open-endedness of the continuative aspect is in conflict with the temporal endpoint imposed by the *for*-PP.

5.4.5 The dynamicity of *-xiaqu*

The continuative viewpoint indicates the succession of a situation after a certain internal point (i.e. the resumptive point). This continuative feature determines that *-xiaqu* is characterised by the feature of dynamicity. Continuativity is different from durativeness in that the former can only be dynamic whereas the latter can be either dynamic or stative (cf. section 5.1.6). In Comrie's (1976) words, to remain continuative consumes some energy (cf. section 3.2.1), that is why *-xiaqu* is considered dynamic.

The dynamic feature of the continuative aspect is more clearly illustrated by its effect in coercing a stative situation into a dynamic one (cf. section 5.4.2). Consider the example in (63a), which is repeated here as (71a), and its modification (71b):

- (71) a. *kanlai tianqi hai hui leng-xiaqu*
 apparently weather still will cold-CONT
 "It seems that it will get even colder"
- b. *jintian tianqi hen leng*
 today weather very cold
 "It is very cold today"

As noted in section 5.4.2, *-xiaqu* interacting with gradable adjectives not only signifies continuation but indicates intensification as well. Intensification is a dynamic process, because the degree of the quality introduced by an adjective at a later stage is always greater than that at a preceding stage, as shown in the translation of (71a). In contrast, (71b) denotes a durative but not continuative situation. As durativeness does not necessarily involve change,⁴⁵ the situation in (71b) is stative.

We have so far been concerned with overt aspect marking in Chinese, which is instantiated by four perfective and four imperfective aspects. In Chinese discourse, however, covert aspect marking, namely, the utterances unmarked for viewpoint aspect, is a frequent and important strategy to express aspectual meanings (cf. McEnery & Xiao 2002:212). We will examine this type of aspect marking in the section that follows.

5.5. The zero aspect: covert aspect marking

Smith (1997:77–81) includes a “neutral viewpoint” in her basic inventory of aspectual viewpoints. The temporal schema of the neutral viewpoint includes the initial endpoint and at least one internal stage (following the initial endpoint) of the situation.⁴⁶ Because of this special schema, the neutral viewpoint “is weaker than the perfective in allowing open readings” but “stronger than the imperfective because it allows closed readings” (Smith 1997:78). According to Smith, English does not have the neutral viewpoint, because all English verbs have to appear either in non-progressive or progressive form. When they take the non-progressive form, situations are typically viewed perfectly; and when they take the progressive form, situations are viewed imperfectively. In contrast, since “viewpoint morphemes are syntactically optional” in Chinese (Smith 1997:277), sentences may appear in discourse without being marked aspectually. Smith argues that these aspectually unmarked sentences have the neutral viewpoint, i.e. they are “neither perfective nor imperfective” (1997:278).

Smith (1997) needs a neutral viewpoint to discuss Chinese data because her analysis is restricted to single sentences (cf. also Schilder 1995). For languages in which there is no visible effect of grammatical aspect, it may be necessary to assume a third notion of the neutral aspect (cf. de Swart 1998).⁴⁷ But as we have seen in chapter 4 and sections 5.1–5.4, Chinese has abundant aspect markers. Therefore, it can be argued that a “neutral viewpoint” does not apply to Chinese. In fact, we did not find any instance of aspectually unmarked sentence that is “neither perfective nor imperfective” in our corpus data. It is true that many clauses in Chinese discourse are not overtly marked, but as Smith (1997) herself observes:

Although LVM [i.e. lack viewpoint aspect marker] sentences occur in different contexts and genres, two very general conventions can be stated: LVM sentences are possible when (1) the viewpoint information of an LVM sentence would be redundant, because it is conveyed by other means in the sentence or context; or (2) the information conveyed by an LVM sentence is backgrounded rather than foregrounded. (Smith 1997:280)

If the “other means” make explicit the viewpoint information of aspectually unmarked sentences, how can these sentences have a neutral viewpoint that is “neither perfective nor imperfective”?⁴⁸ Smith is right when she posits that the neutral viewpoint does not apply to stative sentences (1997:278), because

statives do not have to be marked aspectually (cf. section 4.1.3). For dynamic situations, there are two types of aspectually unmarked sentences in discourse. They are “either imperfective as *irrealis* (e.g. future, habitual or conditional) or as having a perfective aspect deleted for discourse reasons” (Chu 1987: 4; cf. Yang 1995: 138). For example:

- (72) a. *Wang tongchang he pijiü* (Smith 1997: 276)
 Wang usually drink beer
 “Wang usually drinks beer”
- b. *ruguo fanzui-fenzi fankang, women xiashou yao hen*
 if criminal resist, we strike must ruthless
 “If the criminals resist, we must strike out ruthlessly”
- c. *yi-ge [...] bairen qingnian chuangu [..] yi-ge*
 one-CLF white youngster rush-into one-CLF
jiaji zhensuo, yong buqiang xiang limian
 family-planning clinic, use rifle at inside
de ren saoshe, ranhou taozou-le
 GEN people strafe, then escape-CTL
 “A white youngster rushed into a family planning clinic, and strafed people there with his rifle, and then ran away”

Example (72a) denotes a habitual situation, and the subordinate clause in (72b) is a conditional clause. As they are not viewed in their entirety, these *irrealis* situations have the imperfective viewpoint.⁴⁹ Example (72c) is a discourse segment in which a series of events are presented, with only the last of the series overtly marked with the actual *-le*. In this case, the series is taken as a whole. The events preceding the last can also take the aspect marker if the speaker wants to regard them as separate events or wants any of them to stand out as separate events (cf. Yang 1995: 138). Chang (1986: 265), in his investigation of *-le* in newspaper articles, editorials and stories, also finds that *-le* is “used as an explicit marker for the peak event in a discourse segment” that presents a series of events, even though *-le* applies to the whole series of events rather than just the peak event (cf. also Smith 1997: 279).⁵⁰ Therefore, aspectually unmarked sentences like these cannot be considered to have the neutral aspect that is neither perfective nor imperfective. They are aspectually marked, but the aspect markers are deleted for discourse reasons.⁵¹

Christensen (1994) finds in his narrative data that aspectually unmarked sentences tend to have the perfective viewpoint. In news reportage, and espe-

cially in news headings, it is a quite common practice to leave out aspect markers, and *-le* in particular (cf. Zuo 1997: 111). For example:

- (73) a. *Pudong kaifa you you yi-ge xin timu*
 Pudong develop again have one-CLF new topic
 (Zuo 1997) (News heading)
 “There is a new topic for the development of Pudong”
 b. *Guangzhou qingchu “dingshi zhadan”* (News heading)
 Guangzhou clear-away time bomb
 “Guangzhou cleared away a ‘time bomb’”

Sometimes, the aspect marker *-le* is left out in news headings but is retained in news texts:

- (74) a. *Yingguo jingfang guanbi yu Ai’erlan*
 UK police close with Ireland
tongdao (Zuo 1997) (News heading)
 passageway
 “The British police closed passageways between Britain and Ireland”
 b. *Yingguo jingfang 5-ri chongxin guanbi-le*
 UK police 5th-date again close-ACTL
Ai’erlan yu Bei-Ai’erlan zhijian de
 Ireland and North-Ireland between GEN
san-tiao tongdao (Zuo 1997) (News text)
 three-CLF passageway
 “The British police closed three passageways between Ireland and North Ireland again on the 5th”

With most monosyllabic verbs, *-le* cannot be omitted, though most disyllabic verbs do not have such a requirement. Compare the corpus example (75a) and its modified alternatives (75b-c):

- (75) a. *huangmang zhong diu-xia-le yi-zhi*
 hurry middle leave-behind-ACTL one-CLF
buxie
 cloth-shoe
 “(The criminal) left a cloth shoe behind him in a hurry”
 b. *huangmang zhong diu-le/diu-xia/*diu*
 hurry middle lose-ACTL/leave-behind/*lose
yi-zhi buxie
 one-CLF cloth-shoe
 “(The criminal) lost/left behind him a cloth shoe in a hurry”

- c. *huangmang zhong yishi/yishi-le yi-zhi*
 hurry middle lose/lose-ACTL one-CLF
buxie
 cloth-shoe
 “(The criminal) lost a cloth shoe in a hurry”

In these sentences, *diu* “to lose” is a monosyllabic verb while *diu-xia* “to leave behind” and *yishi* “to lose” are disyllabic, therefore *-le* following *diu-xia* “to leave behind” and *yishi* “to lose” can be left out whereas *-le* following the monosyllabic *diu* “to lose” cannot. Sentence (75b) also shows that the aspect marker *-le* can be omitted when it occurs with RVC compounds, because RVCs function to perfectivise a situation (cf. section 4.4). Thus the following examples without *-le* are acceptable:

- (76) a. *wo kan-wan zhe-pian xiaoshuo hou bian xiang [...]*
 I read-finish this-CLF story after then think
 “Having finished reading this story, I thought [...]”
 b. *yong suliao dai bao-hao mai zai men qian di-li*
 use plastic bag wrap-ready bury in door front field-in
 “(He) wrapped the rest of money in a plastic bag and buried it in the field in front of his house”

When a sentence ends with the negative adverb *meiyou* “not” (cf. section 4.1.1) or the COS *le* (see section 4.1.7), the perfective marker *-le* can also be left out, as shown in the following sentences:

- (77) a. *Xiao Zhang diu(-le) san meiyou? (Zuo 1997)*
 Xiao Zhang lose(-ACTL) umbrella not
 “Did Xiao Zhang lose his umbrella?”
 b. *Xiao Zhang diu(-le) san le*
 Xiao Zhang lose(-ACTL) umbrella COS
 “Xiao Zhang has lost his umbrella”

The above analysis shows that aspectually unmarked sentences in Chinese do not have a neutral viewpoint as Smith claims. Sentences unmarked for viewpoint aspect typically occur in three contexts. Stative situations normally do not take an aspect marker because statives do not have to be marked aspectually. For dynamic situations, there are two types of aspectually unmarked sentences in discourse. They are either *irrealis* imperfectives or perfectives without overt aspect marking. We assume that sentences without overt

aspect marking have the ‘zero aspect’, because they convey aspectual meanings but take the zero form. When taken in isolation, these aspectually unmarked sentences may be ambiguous between perfective and imperfective readings; but in discourse, their aspectual meanings are made explicit by context. As such, the zero aspect can be either perfective or imperfective, depending on context. It is not an independent viewpoint aspect.

In conclusion, there are four imperfective viewpoints in Chinese: the durative aspect marked by *-zhe*, the progressive aspect marked by *zai*, the inceptive aspect marked by *-qilai* and the continuative aspect marked by *-xiaqu*. Although these viewpoints all present a situation as imperfective, each of them has its own focus. Specifically, *-zhe* focuses on the durativeness of a situation; *zai* focuses on its progressiveness; *-qilai* focuses on its inceptiveness; and *-xiaqu* focuses on its continuativeness. These viewpoints also behave differently in respect to their interactions with situation aspect. The notion of the zero aspect, which refers to sentences that convey aspectual meanings but are not overtly marked, was also introduced in this chapter to take the place of Smith’s neutral viewpoint. In the chapter that follows, we will use the Lancaster Corpus of Mandarin Chinese and the two Freiburg corpora of English to contrast aspect marking in Chinese and British English and American English. We will also explore, on the basis of an English-Chinese parallel corpus, how aspectual meanings in English are translated into Chinese.

Notes

1. Aspect is of a compositional nature, therefore temporal features of a situation are contributed to by all sentential elements (see section 3.2.4) while the aspectual meaning of a sentence is the composite result of situation aspect and viewpoint aspect (cf. section 2.5). But for the sake of conciseness, aspect markers are considered in this book as the carrier of such information.
2. In addition to indicating durativity, *-zhe* can also be used in imperatives for emphasis (e.g. *ting-zhe* ‘Listen!’), *kuai-zhe dian'er* ‘Be quick!’) or in evaluative sentence (e.g. *zhe cai kan-zhe haokan, chi-zhe bu xiang* ‘This dish is good to look but not delicious to eat’) meaning ‘as far as *V-ing* is concerned’ (cf. Chao 1968; Zhang L. 1996).
3. Example (5c) can also be felicitously rewritten as *men shang xie-zhe ji-ge zi* ‘Several characters are written on the door’. Then, the event also becomes atelic.
4. Mellor (1995:79) also treats ‘He is lying in the bed’ as an activity (his ‘process expression’) with the initial endpoint (*I-bound*), the duration (*Proc-phase*) and the final

endpoint (*F-bound*) and argues that the progressive describes the durative part of the lying-on-the-bed-event.

5. Li & Thompson (1981:222) argue that “most nonactivity verbs cannot take the durative aspect marker.” Their examples (131) to (135) (pp.218–19) involve four ILS verbs indicating personal properties or psychological sensation (*pang* “be fat”, *youqian* “wealthy”, *po* “be broken” and *zhidao* “know”) and one achievement verb (*pengjian* “run into”).

6. Yang (1995:130) is also aware of the emphatic force of *-zhe*, though she totally denies the compatibility of *-zhe* with ILSs. According to Yang, *-zhe* together with attitudinal particle *ne* produces an emphatic implication, as in *tang re zhene* “The soup is hot. (Drink it before it gets cold.)” This argument does not hold, however, because *zhene* is a fixed informal expression used at the end of a sentence to intensify a degree, meaning “very (much), quite, awfully”.

7. As verbs of this class can denote both stative and dynamic situations, Li (1999) regards them as activity verbs.

8. Based on Chinese and Japanese data, Li (1999:221) also argues for the semantic connection between *zai* and *-zhe*.

9. In fact, achievements do not normally take any imperfective aspect marker.

10. States are all durative in nature, there is no instantaneous states. All situations that are instantaneous are events whose initial and final endpoints overlap.

11. Of the 238 verbs taking *-zhe* in both the Weekly training and test corpora, only 28 are posture and positional verbs.

12. *Yiwei* “mean” is an exception. As noted in section 5.1.3, *yiwei* is always affixed with *-zhe*.

13. As an ILS verb, *you* “have” does not have to be aspectually marked (cf. section 4.1.3). If *-zhe* is removed, (30a) loses its emphatic force and simply makes a statement.

14. The notion of “conceptualised mode of existence” suggested by Hu (1995) is useful, but as evidenced by the (a) examples in (32)-(34), his assertion that *-zhe* presents an ongoing state while *-le* presents a resultative state is clearly ungrounded.

15. The original paper was published in *Yuyan Yanjiu* (Language Studies), 1995(2). The paper is accessible online at <http://www.people.fas.harvard.edu/~whu/China/verbcla.htm>.

16. The adverb *zheng* can also signal progressiveness. But it is not considered as an aspect marker because it is only related to progressiveness when used in combination with a predicate while it is possible for it to modify almost all parts of speech. Similarly, while the attitudinal particle *ne* may also indicate the ongoing nature of a situation in some northern dialects (e.g. Ma 1987), the particle is not considered as an imperfective marker as its imperfective function is confined to dialects, and especially to answers to questions in colloquial dialogues.

17. Li & Thompson (1981) and Klein et al. (2000:762–764) argue that both *-zhe* and *zai* express the same imperfective aspect (Klein et al. 2000:762), that is why they cannot give an adequate account of the interaction between *-zhe/zai* and situation aspect. Li &

Thompson, for example, cannot explain why the “durative *zai*” does not occur in complex sentences while Klein et al. claim that “we never use *zai* or *-zhe* with RVCs”, yet “do not have a perfect answer” for this (*ibid*:764). The latter authors do not have an answer simply because their claim is too strong. In fact, some types of RVCs can indeed take *zai* (see section 5.2.2).

18. In this pair of examples, (36d) is an attested example while the others are modifications.

19. Huang (1987) defines the difference between *zai* and *-zhe* in terms of “the immediate-remote opposition.” While *zai* with the sense of immediacy focuses on progressiveness, *-zhe* with the sense of remoteness emphasises a resultant state. As noted in section 5.1.2, *-zhe* presents resultant states only with posture and positional verbs. Furthermore, Huang’s account cannot explain the co-occurrence of *zai* and *-zhe* in the same sentence (as shown by examples in (18) in section 5.1.3), because a situation cannot possibly be both immediate and remote simultaneously.

20. These include two SLSs, namely *zhengzai shushui* “be fast asleep” and *zhengzai relian* “be passionately in love”, which are more event-like (cf. section 3.3.3).

21. Semelfactives taking *-zhe* or *zai* only allow iterative multiple event readings, thus the derived situation type is also durative (cf. section 3.5).

22. Li (1999) does not differentiate between achievements and semelfactives and labels all instantaneous events as “achievements”.

23. As we noted in Table 4.2 in chapter 4, half of the situations taking *-le* are achievements. In contrast, achievements only account for a very small proportion of the situations taking *zai* (see Table 5.4).

24. It is common for the structure of “motion verbs + directional RVC” to take *zai*, as in *ta zhengzai xiang menkou zou-qu* “He is walking towards the door (away from the speaker).” Directional RVC in this structure has no aspectual meaning and only designates direction, therefore the above pattern should not be considered as an achievement.

25. This is evidenced by the fact that internal direct arguments are informationally heavier in these sentences.

26. Of the three achievements taking *zai* in the training corpus, two take directional RVCs (*jinru* “enter into” and *zuo-chu* “make (out)”). A third one is the aspect verb *kaishi* (?*yi-chang xin de nanbei zhanzheng zhengzai kaishi* “A new North-South war is beginning”). The grammaticality of this sentence is questionable. It is suspected that this sentence is influenced by the English original because this is an instance of translated direct speech. It would be more appropriate to say *jijiang kaishi* “be on the way”.

27. Note, however, that *zai* precedes a verb whereas *-zhe* follows a verb.

28. The RVC *kai* “open” can be considered as an example of this type. Like *-qilai*, *-kai* can function to indicate the inception of an event, as in *Wang Jun he jizhe liao-kai-le* “Wang Jun started to chat with the journalist”. However, *-kai* is still in its early stage of development as an inceptive aspect marker and cannot function on its own to provide a viewpoint from which a situation can be presented. For example, the sentence cited above would become ungrammatical if the actual aspect marked *-le* was removed. Another possible

example of aspect marker under way is *-xialai* “come down”, which indicates a continuation till the present or the end, as in *liuchuan-xialai* “hand down” and *jianchi-xialai* “persist to the end”. These “quasi” markers will not be discussed in this book.

29. According to *Encyclopaedia of China-Volume of Language and Writing System* (1985), *-le* developed as an aspect marker during the Tang Dynasty (618–907) (cf. also Cheung 1977); *-zhe* developed as a full aspect marker during the dynasties of Yuan and Ming (around the 14th century); *-guo* became an aspect marker in the Song Dynasty (around 12th century).

30. In fact, *-le*, *-zhe* and *-guo* as aspect markers also derived from their functions as postverbal complements (cf. Dai 1997: 169; Wu 2000).

31. According to Wang (1944), there is no instance of *-xiaqu* functioning to signal the continuativeness of a situation in *A Dream of Red Mansion*, which was written in the 18th century.

32. In fact, our data supports Chen’s (1994) claim that all directional RVCs other than *jin(lai/qu)* “(come/go) into” and *hui(lai/qu)* “(come/go) back” are loaded with directional, resultative and aspectual meanings. For a detailed study of these directional RVCs, see Kang (1999).

33. Huang & Zhang (1997: 210–216) also recognise four functions of *-qilai*: directional *-qilai*, “inchoative” *-qilai* (a metaphorical extension of its directional meaning, derived from the metaphor “to start to move up”), completive *-qilai* and conditional *-qilai* (a metonymic expression of the “inchoative” *-qilai*).

34. In this case *qi* is annotated as INC1 and *lai* as INC2 in our corpus. When *-qilai* indicates resultativeness, however, the object NP can appear either after *-qilai* or optionally split *-qilai*, as in *xiang-qi yi-ge hao zhuyi lai* and *xiang-qilai yi-ge hao zhuyi* “think of a good idea”.

35. Paradoxically, Henne et al. (1977: 133) refer to this split form as something of “‘complement-like’ shapes and ‘suffix-like’ functions.”

36. Kang (1999: 236–243) discusses the interaction of *-qilai* with four types of “accomplishments”: (1) *dai/chuan* “put on; wear”, *ding* “finalise”, *jianli* “set up”, *bian* “weave”; (2) *bai* “arrange, place”, *buzhi* “arrange, decorate”, *chenlie* “display”, *pu* “spread, unfold”, *zhanlan* “exhibit”, *daban* “dress up, make up”; (3) *bao* “wrap”, *baowei* “surround”, *chuan* “string together”, *dui* “pile up”, *guan* “lock up”, *huiji* “collect; converge”, *jihe* “assemble”, *tuanjie* “unite”; (4) *cang* “hide”, *duo* “dodge”, *gai* “cover”, *feng* “seal”, *yinman* “hide, conceal”. In all of these instances, *-qilai* is in fact an RVC indicating resultativeness rather than an inceptive marker, it is therefore hardly surprising that *-qilai* indicates a goal and its resultant state.

37. Kang (1999: 224) gives the example *tamen wan-zhe wan-zhe, huran ku-qilai* “They were playing and playing, suddenly they started crying” to illustrate how *-qilai* can be considered to signal both perfectivity and imperfectivity. While we agree to Kang’s view that *-qilai* does not present a situation perfectively (a more natural expression in the second part of her example would be *huran ku-le-qilai* or *huran ku-qilai-le*), we cannot see in this example why *-qilai* is both perfective and imperfective.

38. *-qilai* can occur with the aspect verb *kaishi* “start” to emphasise the inceptive point, as in *Zhongfang de taidu ye kaishi qianying-qilai* “The Chinese side also started to take an uncompromising stand”. But it should be noted that even if *kaishi* “start” here is left out, the sentence is still dynamic and involves an inceptive change.
39. Li & Thompson (1981:61) argue that the continuative meaning of *-xiaqu* is a “metaphoric extension of its directional meaning into the domain of time.” Therefore the authors consider *-xiaqu* as a compound directional verb.
40. According to Chao (1968:232), Wang (1944) was perhaps the first to regard *-xiaqu* as a “continuative” aspect marker.
41. No instance of the continuative *-xiaqu* was found in the test corpus.
42. *?pang-xiaqu* “to go on getting fat” sounds unnatural perhaps because the lexical meaning of the RVC *-xiaqu* is incompatible with *pang* “be fat”, though in a highly marked context, for example, where someone is recovering from anorexia, one can say that he/she goes on getting fatter. For the same token, it is more natural to say *shou-xiaqu* “to get slimmer” than **shou-qilai* “to start getting slimmer”.
43. This difference corresponds to the distinction between “go on doing something” and “go on with something” in English.
44. As a situation stops and restarts, the resumptive point can be considered as a “restarting point” (Yang 1995: 103; Li 1955: 145).
45. On the other side of the coin, however, a punctual situation is necessarily dynamic, because its initial and final endpoints overlap, that is, a punctual situation ends once it starts (cf. section 3.2.5).
46. It is surprising that the temporal schema of Smith’s neutral viewpoint is so similar to the inceptive viewpoint discussed in section 5.3.
47. Schilder (1995) argues that a neutral viewpoint is required in German, a language without any overt aspect marker.
48. Smith (1997:277–278) gives two aspectually unmarked sentences: (a) **Zhangsan xiuli yi-tai luyinji* “Zhangsan repaired/was repairing one recorder” and (b) **Zhangsan dao jia de shihou, Mali xie gongzuo baogao* “When Zhangsan got home, Mary wrote/was writing her work report”. However, these sentences sound quite odd to a native speaker and cannot stand as they are (cf. also Klein 2000:766). An aspect marker has to be present to make sentences like these acceptable, e.g. *xiuli-le/zai xiuli* in (a) and *xie-le/zai xie* in (b).
49. According to Smith (1997:276), stative sentences unmarked aspectually take a null imperfective viewpoint in Chinese.
50. A peak event can be defined as the most important – and typically the last – event in a series.
51. Wang (1943:159; 1944:282) calls these aspectually unmarked sentences “ordinary aspect”, which takes the zero form.

Aspect marking in English and Chinese

We have so far developed a model of aspect, as outlined in Figure 1.1 in chapter 1, with particular reference to Mandarin Chinese. This model encompasses situation aspect at the semantic level and viewpoint aspect at the grammatical level. In our analysis, the former is language independent whereas the latter is language specific (see section 2.5). As such, our model has not only provided a unified account of aspect, it has also facilitated the cross-linguistic contrast of aspect. In this chapter, we will use this contrastive model of aspect to contrast the distribution of aspect markers in Chinese and British/American English on the basis of three comparable L1 language corpora, namely, the LCMC and FLOB/Frown corpora. We will also explore how aspectual meanings in English are translated into Chinese on the basis of an English-Chinese parallel corpus (see section 1.3 for a description of these corpora). In doing so, we will demonstrate the merits of the model as a language independent framework for not only analyzing a single language, but also for contrasting two or more languages. Before proceeding to the contrast of aspect marking in English and Chinese, however, a brief description of the aspect/tense system in English is needed.

While the perfective/imperfective dichotomy also applies to English, English does not have a productive morphological distinction between the two. Rather English relies on other grammatical and semantic categories like tense to encode this aspectual distinction (cf. section 2.4). In relation to Chinese, English is a less aspectual language with regard to viewpoint aspect. It only differentiates between the simplex viewpoints of the ‘progressive’, the ‘perfect’ and the ‘simple aspect’ in addition to the complex viewpoint of the ‘perfect

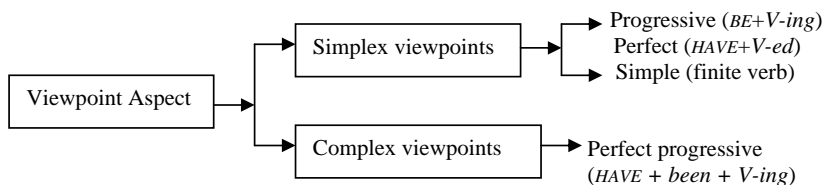


Figure 6.1. Viewpoint aspects in English

progressive' (cf. Biber, Johansson, Leech, Conrad & Finegan 1999:461; Svalberg & Chuchu 1998), as illustrated in Figure 6.1. In the figure, the auxiliaries in small capitals refer to the lemmas.

The aspect markers in English, however, are combined with tense markers morphologically and/or syntactically, as shown in Table 6.1.¹

Table 6.1. Combined aspect/tense markers in English

Aspect	Tense	Description	Linguistic form
Simple	Present	Simple present	V(-s)
	Past	Simple past	V-ed
	Future	Simple future	will/shall/BE going to V
Progressive	Present	Present progressive	is/am/are V-ing
	Past	Past progressive	was/were V-ing
	Future	Future progressive	will/shall be V-ing
Perfect	Present	Present perfect	have/has V-en
	Past	Pluperfect	had V-en
	Future	Future perfect	will/shall have V-en
Perfect progressive	Present	Present perfect progressive	have/has been V-ing
	Past	Pluperfect progressive	had been V-ing
	Future	Future perfect progressive	will/shall have been V-ing

Having introduced the morphologically combined aspect/tense markers in English, it is now appropriate to contrast aspect marking in Chinese and British/American English.

6.1. Distribution of aspect markers in English and Chinese

While Chinese has a sophisticated aspect marker system, consisting of four perfective aspects (chapter 4) and four imperfective aspects (chapter 5), the part-of-speech tagger we used to analyze the Lancaster Corpus of Mandarin Chinese only recognised *-le*, *-guo*, *zai* and *-zhe* as aspect markers. Hence, we decided to explore the four aspect markers in this section. The frequencies of these markers in LCMC are as shown in Table 6.2.²

Table 6.2. Distribution of aspect markers in LCMC

Average	Text type	Words (10k)	Frequency	Frequency per 10k words	Percent
Above the average	K	5.8	1,674	289	12.00%
	M	1.2	322	268	11.13%
	P	5.8	1,384	238	9.88%
	R	1.8	387	215	8.92%
	L	4.8	1,024	214	8.88%
	G	15.4	3,140	204	8.47%
	N	5.8	1,107	191	7.93%
	A	8.8	1,539	175	7.26%
Average	Average of frequency per 10k words: 161 (6.68%)				
Below the average	F	8.8	1,057	120	4.98%
	C	3.4	365	108	4.48%
	D	3.4	363	106	4.40%
	B	5.4	561	104	4.32%
	J	16.0	1,355	84	3.49%
	E	7.6	412	54	2.24%
	H	6.0	231	39	1.62%

In English, perfective meaning is most commonly expressed by the simple past (cf. Brinton 1988: 52), though the perfect can also mark perfectivity (Dahl 1999: 34). Imperfective meaning is typically signalled by the progressive, and less often by the perfect progressive. For the purpose of contrasting English aspect marking with Chinese we counted the distribution of the four aspects of English. The frequencies of aspect markers in FLOB and Frown are given in Tables 6.3 and 6.4.³

Tables 6.2–6.4 show that in both LCMC and FLOB/Frown, the text categories where the frequency of aspect markers is above average (categories L, M, N, P, R and K) or near to the average (categories A and G in Tables 6.3–6.4) are the five fiction categories plus humour, biography and press reportage. The text types where aspect markers occur least frequently include reports/official documents, academic prose, skills/trades/hobbies, press reviews, press editorials, religion and popular lore.

In both Chinese and the two major varieties of English considered here, there is a great difference in usage between the first and second groups of texts, which indicates that the two are basically different. Text types like fiction,

Table 6.3. Distribution of aspect markers in FLOB

Average	Text type	Words (10k)	Frequency	Frequency per 10k words	Percent
Above (near to) the average	P	5.8	5,673	978	11.17%
	L	4.8	4,624	963	11.00%
	N	5.8	5,255	906	10.34%
	K	5.8	5,169	891	10.17%
	M	1.2	997	831	9.49%
	R	1.8	1,313	729	8.32%
	A	8.8	5,166	587	6.70%
G	15.4	8,257	536	6.12%	
Average	Average of frequency per 10k words: 584 (6.67%)				
Below the average	D	3.4	1,317	388	4.43%
	F	8.8	3,353	381	4.35%
	E	7.6	2,724	358	4.09%
	B	5.4	1,886	349	3.98%
	H	6.0	1,740	290	3.31%
	C	3.4	978	288	3.29%
	J	16.0	4,524	283	3.23%

Table 6.4. Distribution of aspect markers in Frown

Average	Text type	Words (10k)	Frequency	Frequency per 10k words	Percent
Above near to) (the average	L	4.8	4,546	947	10.95%
	M	1.2	1,119	933	10.78%
	N	5.8	5,349	922	10.66%
	P	5.8	5,238	903	10.44%
	R	1.8	1,534	852	9.85%
	K	5.8	4,815	830	9.59%
	A	8.8	4,816	547	6.32%
G	15.4	7,799	506	5.58%	
Average	Average of frequency per 10k words: 577 (6.67%)				
Below the average	F	8.8	3,397	386	4.46%
	B	5.4	1,893	351	4.06%
	E	7.6	2,617	344	3.98%
	C	3.4	1,155	340	3.93%
	D	3.4	1,053	310	3.58%
	J	16.0	4,024	252	2.91%
H	6.0	1,368	228	2.64%	

humour and biography are narrative whereas reports/official documents, academic prose and skills/trades/hobbies are expository.⁴ Press reportage is a transitory category which is more akin to narrative texts.

Log-likelihood (LL) tests indicate that in both Chinese and the two varieties of English, the differences between the distribution of aspect markers in narrative and expository texts are statistically significant (see Table 6.5).⁵ In all of the three corpora, aspect markers occur in narrative texts twice as frequently as in expository texts (2.43 times in LCMC, 2.21 times in FLOB and 2.27 times in Frown), which means that the higher frequency of aspect markers in narrative texts over expository texts is a common feature of Chinese and the two major varieties of English.

Table 6.5. Distribution of aspect markers in narrative and expository texts

Corpus	Type	Categories	Words	Markers	LL ratio	Sig. level
LCMC	Narrative	K-R, A, G	494,000	10,577	2,796.53	<0.001
	Expository	B-F, H, J	506,000	4,344		
FLOB	Narrative	K-R, A, G	494,000	36,454	7,771.37	<0.001
	Expository	B-F, H, J	506,000	16,522		
Frown	Narrative	K-R, A, G	494,000	35,216	7,950.98	<0.001
	Expository	B-F, H, J	506,000	15,507		

These findings confirm the claim by McEnery & Xiao (2002: 224–225) that aspect markers in English and Chinese are significantly more frequent in narrative texts than expository texts and allow us to generalise this claim from the domain studied by McEnery & Xiao (*ibid*), public health, to English and Chinese in general. As can be seen from Figure 6.2, while the two languages differ typologically, they show a strikingly similar distribution pattern of aspect markers. It is also interesting to note that while British English and American English have developed variations in spelling (e.g. *behaviour* vs. *behavior*), word choice (e.g. *petrol* vs. *gasoline*) and grammar (e.g. American English has two participle forms for the verb *get*, namely *got* and *gotten* whereas British English only uses the form *got*) (cf. Biber et al. 1999: 19), their use of aspect is strikingly similar – the curves for the distribution of aspect markers for FLOB and Frown are almost identical to each other (see Figure 6.2).

Chinese and English, however, do show some differences in the distribution of aspect markers, as shown in Figure 6.3. The figure shows the frequencies of

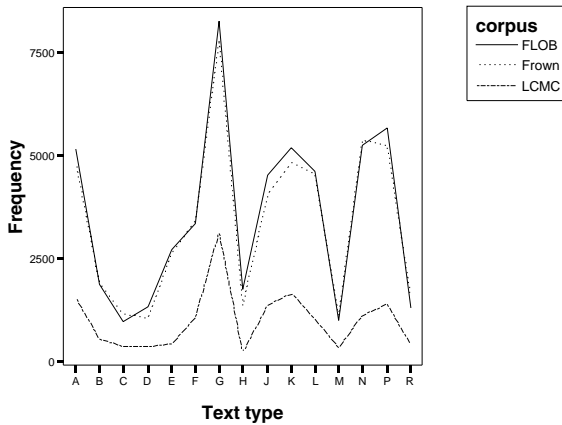


Figure 6.2. Distribution of aspect markers (frequency)

aspect markers, as percentages, in the fifteen text categories in the three corpora. As can be seen, by comparison to the two major varieties of English, aspect markers in Chinese occur more frequently in categories G and K but less frequently in N, L, P, H and E.⁶ The relatively low frequency of aspect markers in category N (martial arts fiction) in relation to other fiction types, as noted in section 1.3, is shown even more markedly in the contrast of the N category between LCMC and FLOB/Frown. British English and American English also differ in that the latter variety does not show such a marked fluctuation in aspect marking in narrative texts, notably in biography and the five types of fiction.

The general patterns as shown in Figure 6.3, however, may mask some important differences in aspect marking in English and Chinese. It may also mask some differences between the two major varieties of English, though the contrast between the varieties is not as marked as that between Chinese and English, as shown in Table 6.6. This table gives the log-likelihood scores and significance levels of individual text categories (1 degree of freedom), where statistically significant values are highlighted. This table can be read in conjunction with Figure 6.3 or Tables 6.2–6.4 to identify the text categories where aspect markers are significantly more (or less) common in Chinese and British/American English.⁷

The picture becomes clearer if we examine perfective and imperfective markers separately. Figure 6.4 shows the percentages of perfective markers

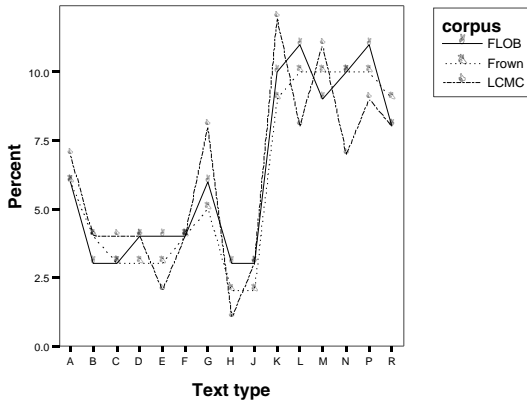


Figure 6.3. Distribution of aspect markers (percentage)

Table 6.6 . Contrasting the distribution of aspect markers

Category	LCMC vs. FLOB		LCMC vs. Frown		FLOB vs. Frown	
	LL score	Sig. level	LL score	Sig. level	LL score	Sig. level
A	0.925	0.336	2.672	0.102	1.029	0.310
B	0.528	0.467	0.319	0.572	0.059	0.808
C	7.461	0.006	1.448	0.229	5.160	0.023
D	0.004	0.949	3.348	0.067	8.127	0.004
E	20.245	<0.001	18.162	<0.001	0.139	0.709
F	1.714	0.191	1.142	0.285	0.129	0.720
G	15.925	<0.001	20.211	<0.001	0.569	0.451
H	21.608	<0.001	21.937	<0.001	0.004	0.948
J	0.383	0.536	2.040	0.153	1.482	0.223
K	6.467	0.011	11.530	0.001	1.640	0.200
L	9.269	0.002	8.844	0.003	0.011	0.918
M	5.553	0.018	0.224	0.636	8.036	0.005
N	13.032	<0.001	16.305	<0.001	0.453	0.501
P	3.294	0.070	0.641	0.423	2.400	0.121
R	0.871	0.351	1.875	0.171	12.264	<0.001

occurring in each text category in the three corpora. As can be seen in the figure, in expository texts (barring category E) perfective aspect markers in LCMC generally occur more frequently than those in English whereas in narrative texts (except for category G), perfective markers in English are generally more frequent than those in Chinese. The relatively high frequency of perfective markers in narrative texts and their lower frequency in expository texts in English can be accounted for by the fact that aspect markers in English express both temporal and aspectual meanings. 82.5% of the 48,902 perfective markers in FLOB, and 84.8% of the 46,866 perfective markers in Frown, are simple past forms. Narrative texts are normally related to what happened in the past whereas expository texts are typically non-past. Hence the relatively high frequency of perfective markers in narrative as opposed to expository texts is understandable.

As would be expected, the contrast between British English and American English is once again not as marked as that between Chinese and English (see Figure 6.4). The two varieties of English show more similarity in expository texts than in narrative texts. In expository texts, the two varieties show a very similar distribution pattern except that British English registers a slightly greater percentage of perfective markers in categories D, H and J. Similarly, in narrative texts (except categories M and R), British English generally shows a greater frequency of usage than American English. One possible explanation for this is that while the perfect aspect is typically more common in British English, the contrast in narrative texts is more marked than in expository texts, as shown in Figure 6.5.

This finding is in line with Biber et al. (1999:462), who observe that in British English news the perfect aspect is much more common than in American English news. While the contrast between the three news categories in FLOB and Frown is not as marked as that observed by Biber et al. (1.29 times more frequent in FLOB news categories), the perfect is indeed more frequent in nearly all of the text types in FLOB (except for category M). The wide coverage of the perfect lends further credence to the claim of Biber et al. (*ibid*) that “BrE strongly favours the perfect in comparison with AmE.” However, one should note that the ratio of the perfect in FLOB and Frown (1.15:1) is slightly lower than that reported in Biber et al. (1.33:1).

In marked contrast, as can be seen in Figure 6.6, imperfective aspect markers show a totally different distribution pattern from perfective markers. In expository texts, imperfective markers in both varieties of English typically

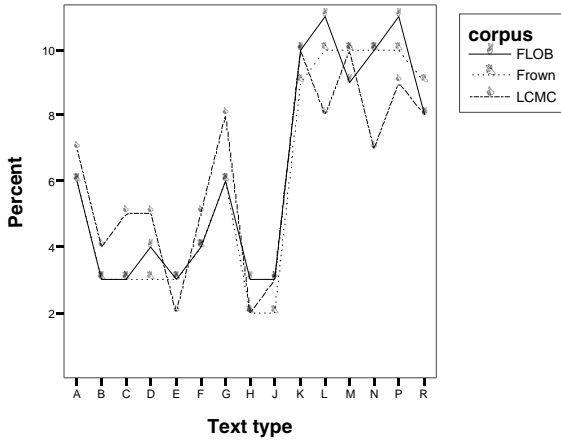


Figure 6.4. Distribution of perfective aspect markers

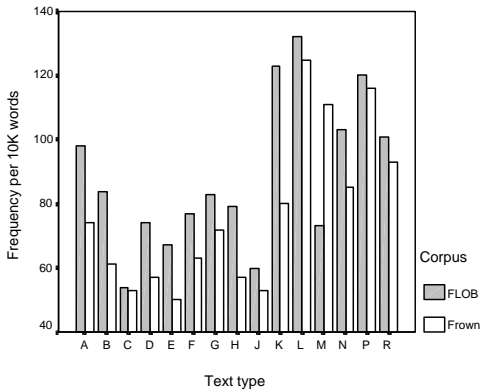


Figure 6.5. Distribution of the perfect in FLOB/Frown

occur more frequently than those in Chinese whereas in narrative texts, imperfective markers in Chinese are generally more frequent than those in English.

This phenomenon can be explained as follows. First, the Chinese progressive marked by *zai* can only signal progressiveness literally. In contrast, the English progressive has a number of other uses in addition to signalling progressiveness (see sections 5.2.3 and 6.2.1). While the different uses of the progressive in English and Chinese account for the slightly higher frequency of the English imperfective markers in expository texts, it cannot explain the

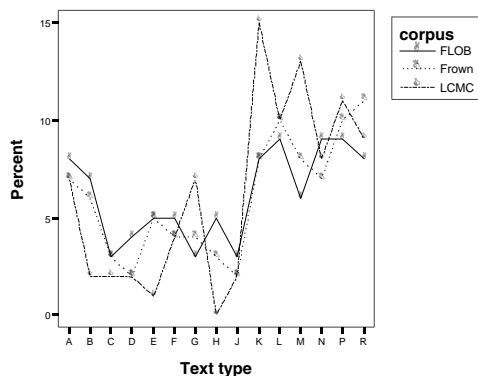


Figure 6.6. Distribution of imperfective aspect markers

relatively low frequency of these markers in narrative texts. Nevertheless, we can find an answer in the Chinese imperfective marker *-zhe*, which accounts for 88% of the 3,836 instances of imperfective markers in LCMC. This marker has three basic functions: to signal the durative nature of a situation, to occur in V_1 -*zhe* V_2 constructions to provide background information and to occur in locative inversion/existential constructions (section 5.1.1). Of the three functions of *-zhe*, only the first is used in expository texts. Hence, in spite of the high overall frequency of *-zhe* in LCMC, only about 20% of all examples of *-zhe* occur in expository texts. In contrast, all of the three functions of *-zhe* apply to narrative texts. Furthermore, in addition to inducing a background effect, *-zhe* can also be used in an apparently ‘foregrounded’ situation to move narration forward (cf. section 5.1.7). As such, it is hardly surprising that Chinese imperfective markers occur more frequently in narrative texts than English imperfective markers.

Figure 6.6 also shows some important differences in the distribution of imperfective markers in British English and American English. In expository texts, imperfective markers in British English are typically more common than in American English whereas in narrative texts (except for category N and less markedly for the transitory category A), imperfective markers in American English generally occur more frequently than in British English (see Figure 6.7).

The narrative texts in FLOB/Frown are distributed mainly in the five fiction types plus humour. Yet imperfective markers in American English are more

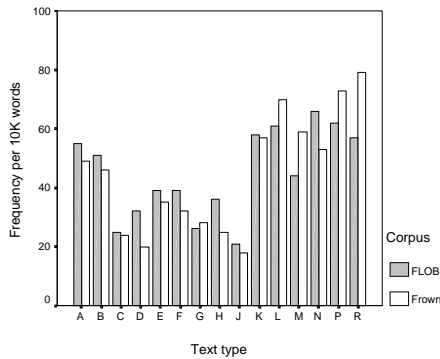


Figure 6.7. Distribution of imperfective markers in FLOB/Frown

frequent in four of these six categories. While imperfective markers in British English are slightly more frequent than in American English for category K, the difference is not statistically significant (58 vs. 57 instances per 10,000 words). According to Biber et al. (1999: 462), the progressive aspect in American English conversation is much more common than in British English conversation. The imperfective markers we counted in this case study are the progressive and the perfect progressive. As perfect progressive verb phrases are extremely rare in all categories (less than 0.5% of all verb phrases according to Biber et al.: *ibid*), the influence of the perfect progressive on the overall frequency may, in effect, be discarded. Fiction and humour typically dwell on dialogue and thus bear a close resemblance to conversation (cf. Biber 1988).⁸ As such, it is hardly surprising that imperfective markers in American English are more common in these genres than those in British English.

As situation aspect is a language independent component of our aspect model (cf. section 2.5), we have focused on the contrast of viewpoint aspect in this section. It can be seen from the above analysis that there are both similarities and differences in the distribution of aspect markers in English and Chinese. Following naturally from this analysis is the question of how aspect markers in English are expressed in Chinese. In the next section, we will explore the Chinese translation patterns of English aspect markers. Note that in the following discussion, our unified aspect model is also useful in explaining shifts of situation and viewpoint aspect which often occur in translations. Hence, as well as being of use in contrastive linguistics, our aspect model can help us to explore the process of translation.

6.2. Chinese translation of English aspect markers

The discussion in this section is based on the English-Chinese parallel corpus described in section 1.3. The English texts of the corpus contain 7,716 tensed verbs,⁹ as shown in Table 6.7.

Table 6.7. Tensed verbs in the English texts

Aspect	Present	Past	Future	Total	Percent
Progressive	164	110	3	277	3.61%
Perfect	371	253	3	627	8.17%
Perf. prog.	16	8	0	24	0.31%
Simple	3,037	3,468	242	6,747	87.91%
Total	3,588	3,839	248	7,675	100%

As can be seen from the table, the majority of the tensed verbs take the simple aspect. The perfect is less frequent than the simple aspect but more common than the progressive. The perfect progressive occurs only rarely. These findings are in line with those reported in Biber et al. (1999:461).¹⁰ In the sections that follow, we will explore the Chinese translation patterns of English aspect and the effect of situation aspect on these patterns.

6.2.1 The progressive aspect

In addition to its canonical use to signal the ongoing nature of a situation (e.g. 1a), the progressive in English can also indicate habitual or iterative situations (e.g. 1b), to indicate anticipated happenings in the future (e.g. 1c), and some idiomatic use to add a greater emotive effect (e.g. the hyperbolic use of the progressive as in 1d) (cf. Leech 1971:27–29; Comrie 1976).

- (1) a. John is singing. (Comrie 1976:32)¹¹
- b. I'm taking dancing lessons this winter. (Leech 1971:27)
- c. We're visiting Aunt Rose tomorrow. (*ibid*:29)
- d. I'm continually forgetting people's names. (*ibid*)

In Chinese, however, the progressive marked by *zai* only corresponds to the first category above (cf. section 5.2), namely, to signal the ongoing nature of a dynamic situation (cf. section 3.2.1). Apart from the progressive *zai*, a related

but distinct viewpoint is the durative aspect marked by *-zhe*, which signals the durative feature of either dynamic or stative situations (see section 5.1). In addition, the adverb *zheng* “just, exactly” also indicates the ongoing nature of a situation when modifying a predicate.

In the English texts of our parallel corpus, a total of 277 instances of simplex progressives were found,¹² as shown in Table 6.8.

Table 6.8. Distribution of progressives in the English source data

Usage	Frequency
Ongoing situations	259
Habitual situations	6
Anticipated happenings	12
Total	277

These progressive forms are translated into Chinese either as ongoing (58.12%), or as perfective (40.79%), or paraphrased/omitted (1.09%). The aspectual meanings can be marked either overtly or covertly, i.e. taking no aspect marker (see section 5.5), as shown in Table 6.9. This table is revealing. First, in English-Chinese translation, most progressives in English (58.12%) do not undergo a shift in viewpoint aspect, though some of them (15.52%) do not take an aspect marker. Second, whether a viewpoint aspect shift occurs in translation depends largely on the specific use of the progressive in the English source data, and on the interaction between situation aspect and viewpoint aspect in the Chinese target language. This means that on the one hand, when progressives in the English source data that indicate habitual situations or anticipated happenings are translated into Chinese, they necessarily undergo a viewpoint aspect shift, because the progressive in Chinese does not indicate habituality or futurity. On the other hand, when a translation triggers a situation type shift into individual-level state (ILS) or achievement (ACH) in the Chinese target language, a viewpoint aspect shift is also expected, because these two types of situations do not normally take the prototypical progressive (cf. section 5.2.2).¹³

It is also interesting to note that when a telic situation (accomplishment or achievement) is translated into Chinese, it is more likely (65.67%) to be presented perfectly, because only a perfective viewpoint covers its final spatial endpoint. Activities, however, rarely undergo a viewpoint aspect shift.

Of the 149 activities taking the progressive form in English, only 19 are translated perfectly.

A closer examination of the concordances of these sentence pairs tells the full story, as shown in Table 6.10. As noted earlier in this section, when an English progressive indicates a meaning other than canonical progressiveness, it is quite natural to expect a viewpoint aspect shift. Verbs introducing direct speech, such as *shuodao* “say”, *handao* “shout”, *xiaodao* “laugh”, are normally incompatible with imperfective viewpoints when they function as reporting verbs. Hence these verbs are naturally translated perfectly. Yet viewpoint aspect is subjective, and the speaker, as well as the translator, can choose to present an activity perfectly or imperfectly provided that no conflict arises between situation aspect and viewpoint aspect. As such, the same activity may be presented imperfectly in the English source data (e.g. 2a), whereas it is translated perfectly into Chinese (as in the attested translation 2b). It is also possible to present the situation as ongoing (as in the alternative translation 2c). Viewpoint aspect allows the speaker to focus on a part or the whole of a situation. But when the translator chooses to present an activity in its entirety, the perfectivity needs to be marked explicitly.

- (2) a. As if the machine was somehow drawing power from the people that were around it.
- b. *na-jia jiqi sihu shi cong weiguan de ren*
that-CLF machine as-if is from on-looking GEN people
shenshang huoqu-le liliang
body-on acquire-ACTL power
“As if the machine **had somehow drawn** power from the people that were around it”
- c. *na-jia jiqi sihu shi zai cong weiguan de*
that-CLF machine as-if is PROG from on-looking GEN
ren shenshang huoqu liliang
people body-on acquire power
“As if the machine **was somehow drawing** power from the people that were around it”

In English, when the progressive aspect combines with tense, the past progressive, present progressive and future progressive are the results (see Table 6.1). As Chinese does not mark tense grammatically, the temporal notions indicated by English tenses are lexicalised in Chinese. Hence, while

Table 6.9. Aspect marking of the English progressives in Chinese translations

[±Progressive] in the English data	Aspect marker	Situations	Frequency	Total	
Progressive	<i>(zheng)zai</i>	SLS	1	118(42.6%)	
		ACT	50		
		ACC	7		
	- <i>zhe</i>	ILS	3		
		SLS	2		
		ACT	6		
	<i>(zheng)zai...-zhe</i>	ACT	7		
		Double-role <i>zai</i>	ACT		8
	<i>zheng</i>	ACC	1		
		ILS	1		
		ACT	22		
	Aspectually unmarked	ACC	4		
		ACH	6		
		SLS	1		43(15.52%)
		ACT	37		
		ACC	4		
		ACH	1		
		ACT	2		
	ACC	1			
ACH	4				
RVC	ACH	17			
RVC...- <i>le</i>	ACH	6			
Aspectually unmarked	ILS	49	83(29.96%)		
	SLS	1			
	ACT	17			
	ACC	4			
	ACH	12			
Paraphrase/omission			3	3 (1.09%)	
Total				277 (100%)	

Table 6.10. Viewpoint aspect shift in translations of activities

Uses	Aspect marking	Frequency
Anticipated happenings	Aspectually unmarked	4
Habitual situations		6
Future progressive		5
Reporting verbs (e.g. <i>say</i> , <i>shout</i>)		2
Others	- <i>le</i>	2
Total		19

the past and present progressives in the English source data follow the patterns identified above when they are translated into Chinese, the future progressive, which signals the ongoing nature of a situation with a future time reference in the English source data,¹⁴ is always translated perfectly, though adverbs and modal auxiliaries like *jiang* “will”, *jijiang* “soon”, *yao* “shall, will”, and *hui* “be likely/sure to” are often used to mark futurity.

6.2.2. The perfect aspect

The English perfect typically signals the current relevance of a past situation (cf. section 2.4). Chinese does not have the perfect construction. While the change-of-state (COS) *le* does denote current relevance state (cf. section 4.1.7), it is different from the English perfect in many respects. As noted in section 2.4, the perfect is not monolithic. According to Comrie (1976:56), the current relevance of a situation in the past can be manifested in four different ways: the perfect of result, the perfect of experience, the perfect of recent past and the perfect of persistent situation. It is this four-way split of the perfect that will be used in this section.

As Comrie (1976:53) notes, not every form labelled ‘perfect’ expresses a perfect meaning. The non-finite verb constructions with *having* plus a past participle, for instance, indicate relative anteriority, because “in such constructions, the distinction between perfect meaning and relative past time reference is not made overtly (is neutralised)” (Comrie 1976:55). Perfect forms taking modals such as *must*, *would*, *could*, and *may/might* do not denote a perfect meaning either (cf. also Brinton 1988:248).¹⁵ Comrie (1976, 1985) even argues that the past perfect (i.e. pluperfect) and the future perfect are absolute-relative tenses rather than grammatical aspects and outlines their differences from the perfect. While Comrie’s (*ibid*) argument does hold some water, it is undeniable that the pluperfect and the future perfect can indeed indicate a perfect meaning. The most obvious case is indirect speech, where the perfect is rewritten as the pluperfect when the main clauses are in the past tense. Even in narrative discourse, not all instances signal relative anteriority alone. As such, we will consider the present perfect as the perfect in its real sense, while the pluperfect and the future perfect are treated as a special case of the perfect (see discussions later in this section). There are 371 instances of the perfect in our parallel corpus.¹⁶ The perfect of result is the most common of the four types of perfect, as shown in Table 6.11.

Table 6.11. The perfect in the parallel corpus

Type of perfect	Situation type	Frequency	Percent
Perfect of result	Accomplishments	56	59.03%
	Achievements	163	
Perfect of experience	ILS	1	12.13%
	SLS	1	
	Activities	16	
	Accomplishments	10	
	Achievements	17	
Perfect of persistent situation	ILS	59	26.41%
	SLS	1	
	Activities	38	
Perfect of recent past	Activities	4	2.43%
	Accomplishments	2	
	Achievements	3	
Total		371	100%

It is also interesting to note from the table that the specific perfect meaning is related to situation types. The perfect of result is only compatible with telic situations, because only these situations can possibly yield a result. The perfect of persistent situation is only felicitous with durative situations, because only these situations can persist over time.¹⁷ Only dynamic situations are compatible the perfect of recent past, because only these situations can happen in the recent past. Like the experiential *-guo*, the perfect of experience does not have any restrictions on the temporal features of a situation and can occur with all situation types. Although no instance of a semelfactive was found in our parallel corpus, it can be safely assumed, on the basis of its temporal features (cf. section 3.3.1), that a semelfactive can have the perfect meanings of recentness (e.g. 3a) or experientiality (e.g. 3b) but is incompatible with the perfect of result. When a semelfactive denotes an iterative multiple event, it can even take the perfect of persistent situation (e.g. 3c). While the perfect of result, the perfect of experience, and the perfect of recent past are perfective by nature, the perfect of persistent situation is imperfective (cf. section 2.4). As such, there are variations in the Chinese translation of the English perfect.

- (3)
- a. The town hall clock has just struck 12.
 - b. He has never beaten his dog.
 - c. He has tapped on his old typewriter since noon.

Comrie (1976:56) defines the perfect as “the continuing relevance of a previous situation.” The clearest manifestation of such relevance is the result of a completed situation. Chinese has the completive aspect signalled by RVCs (see section 4.4). The interaction between the actual *-le* and telic situations also produces a completive reading (cf. section 4.1.2). Therefore, the perfect of result is most frequently (70.78%) translated with the actual or completive aspect (or the actual completive aspect) in Chinese unless the translator chooses to introduce a shift in situation type, as show in Table 6.12.

Discounting the instances of situation type shifts and paraphrases in Chinese translations, the ratio of overt over covert marking registers 2.77: 1. Of the 56 unmarked cases, 31 can actually take *-le*, which is left out for discourse reasons in translation (cf. section 5.5). The remaining cases cannot take *-le* because:

Table 6.12. Translation pattern of the perfect of result

Situation types in English	Marked					Unmarked		Para-phrase	Total	
	<i>-le</i>	RVC	Neg	RVC ... <i>-le</i>	RVC ... <i>Neg</i>	<i>-zhe</i> ¹⁸	<i>yi/yijing</i> Null			
ACC	28	5 ¹⁹	1	7	0	0	6	8	1	56
ACH	38	31	4	36	5	1	23	19	6	163
Total	66	36	5	43	5	1	29	27	7	219

- (i) situation types have shifted to ILSs that do not need to be marked to have closed readings;²⁰
- (ii) translators have chosen an imperfective viewpoint;
- (iii) or the verb constellations in question function as attributives that do not normally take *-le*.

Furthermore, there are 29 unmarked cases taking the adverb *yi/yijing* “already” to lexicalise the perfect meaning of result. While *already* frequently occurs in perfect constructions, this adverb alone can signal current relevance, as evidenced by the possible substitution of the perfect of result with the simple aspect taking *already* in American English and some dialects of British English (cf. Biber, Johansson, Leech, Conrad & Finegan 1999:463).²¹ Like its English equivalent *already*, *yi/yijing* in Chinese can signal the current relevance of a situation.

Chinese has the experiential aspect, which is marked by *-guo* (see section

Table 6.13. The translation pattern of the perfect of experience

Situation type	Marked		Unmarked		Total
	<i>-guo</i>	Negation	<i>ceng/cengjing</i>	Null	
ILS	1	0	0	0	1
SLS	1	0	0	0	1
ACT	8	0	0	8	16
ACC	5	0	2	3	10
ACH	12	1	1	3	17
Total	27	1	3	14	45

4.2). Therefore, translation of the perfect of experience is in principle quite straightforward. The perfect of experience and the experiential *-guo* interact felicitously with all situation types. When stative situations (i.e. ILSs and SLSs) take the experiential aspect in Chinese, they must be marked overtly. With dynamic situations, the experiential aspect marker can be optionally left out in discourse, as can be seen in Table 6.13.

The ratio of overt over covert marking in translations of the perfect of experience is 1.65:1. Of the 17 unmarked cases, with the exception of one instance that optionally underwent a situation type shift from an accomplishment to an ILS in the process of translation (4a-b), all of the others can be optionally marked overtly with *-guo*. This is because the experiential aspect in Chinese expressed exactly the same aspectual meaning as the English perfect of experience. The adverb *ceng/cengjing* ‘once, ever’, when used either alone or in combination with *-guo*, indicates that an event once happened or a state once held and strengthens the force of experientiality.

- (4) a. We’ve been all the way to the moon and back, but have trouble crossing the street to meet the new neighbour.
- b. *women nenggou wangfan yu diqiu yu yueqiu*
 we can go-return between the-earth and the-moon
zhijian, que bu leyu chuanguo malu xiang xin
 between, but not willing cross street to new
linju wenhao
 neighbour greet

The perfect of persistent situation refers to a situation which started in the past and persists up to, and perhaps even beyond, the present. This type of perfect is characteristic of English (Comrie 1976:60). In Chinese there is no

dedicated aspect marker for this meaning. It can be seen in Table 6.14 that situations that go most naturally with the perfect of persistent situation have the feature values of [+durative] and [-telic]. This is because punctual situations do not persist or continue over time, and telic situations must be presented with a perfective viewpoint for its final spatial endpoint to be visible.

Table 6.14. The translation pattern of the perfect of persistent situation

Situation type	Marked			Negation	Unmarked			Paraphrase	Total
	<i>-le</i>	<i>-zhe</i>	<i>zai</i>		<i>yizhi</i>	<i>yijing</i>	Null		
ILS	13	1	0	4	11	5	25	0	59
SLS	0	0	0	0	1	0	0	0	1
ACT	3	0	2	1	5	5	21	1	38
Total	16	1	2	5	17	10	46	1	98

Translations of the English perfect of persistent situation are mainly unmarked aspectually, though there are exceptions. As the perfect of persistent situation is imperfective in nature, the durative marker *-zhe* and the progressive marker *zai* are expected to be compatible with this perfect meaning provided that no conflict occurs in the interaction between situation aspect and viewpoint aspect (e.g. the progressive *zai* only goes well with dynamic situations). With ILSs, even the actual aspect marker *-le* can be used,²² because the interaction of *-le* with unbounded states signals ingressiveness and only defines the left boundary (i.e. the initial endpoint) of a situation while the right boundary is left open (cf. section 4.1.3). There are three activities in the English source data translated into Chinese with the actual *-le*, but two of them underwent a situation type shift from activities to achievements (5 and 6). The other example, as shown in (7), is interesting and deserves more discussion. An activity taking *-le* is reasonably expected to be presented as a whole, including its final temporal endpoint provided by a delimiting device. For example, the attested example (7a) has a closed reading, indicating that he is no longer involved in that study. To indicate the contrary, the combination of the actual *-le* and the change-of-state (COS) *le* must be used, as in the modified alternative (7c) (cf. section 4.1.7). In the alternative translation (7b), only the actual *-le*, instead of its combination with the COS *le*, is used. Yet the sentence still has an open-ended reading rather than the expected closed

reading as in (7a). This is because the adverb *yi* “already” is used in (7b). As noted earlier in this section, *yi/yijing* “already” signals the current relevance of an actualised situation. As an activity does not have a final spatial endpoint, its current relevance is only related to its persistence up to the present. As such, when *yi/yijing* “already” is used, its current relevance reading overrides its actualisation reading. This also explains why these adverbs appear very frequently in aspectually unmarked sentences with perfect meanings.

- (5) a. Since Piaget, the territory **has been widely colonised** by those who write about women’s ways of knowing, Afrocentric ways of knowing, even the computer’s ways of knowing.
- b. *zicong Piyajie yilai, zhe-kuai lingdi dedao-le naxie*
 from Piaget since, this-CLF territory get-CTL those
zhuanxie nüxing renzhi fangshi, Feizhou zhongxin renzhi
 write woman know way, Africa centre know
fangshi, shenzhi shi jisuanji renzhi fangshi de zuojia-men
 way, even is computer know way GEN writers
de guangfan kaituo
 GEN wide open-up
- (6) a. In the past decade Piaget **has been vigorously challenged** by the current fashion of viewing knowledge as intrinsic property of the brain.
- b. *zai guoqu de shi-nian zhong, Piyajie de lilun*
 during past GEN 10-year during, Piaget GEN theory
shoudao-le xianzai liuxing de yi-zhong guandian
 get-CTL now in-fashion GEN one-CLF viewpoint
de jida tiaozhan, houzhe ba zhishi kanzuo shi tounao
 GEN great challenge, the-latter BA knowledge regard is brain
de duyou tezheng
 GEN unique feature
- (7) a. *ta dui gai zhou de tiyu kecheng zuo-le 20-nian*
 he on this state GEN PE program do-CTL 20-year
de yanjiu
 GEN research
 “He studied the state’s PE programs for two decades”

- b. *ta yi dui gai zhou de tiyu kecheng zuo-le 20-nian*
 he already on this state GEN PE program do-CTL 20-year
de yanjiu
 GEN research
 “He has studied the state’s PE programs for two decades”
- c. *ta dui gai zhou de tiyu kecheng zuo-le 20-nian de*
 he on this state GEN PE program do-CTL 20-year GEN
yanjiu le
 research COS
 “He has studied the state’s PE programs for two decades”

As can be seen from Table 6.14, another adverb which is often used to lexicalise the perfect of persistent situation is *yizhi* (or sometimes *yixiang*) “all of the time”. It indicates that a situation occurs *all of the time*, including at least the past and the present, though its future occurrence is speculative. The temporal frame of this lexical meaning coincides with the perfect of persistent situation, thus explaining the frequent occurrence of *yizhi/yixiang* with this perfect meaning.

The perfect of recent past simply indicates “temporal closeness” (Comrie 1976:60) or the nearness of a past situation. Syntactically, its difference with the perfect of result lies mainly in the presence or absence of adverbs such as *recently* or *just*, but this is not absolute, because temporal nearness may present itself in context. Semantically, it is sometimes very difficult, or even impossible, to distinguish the perfect of recent past from the perfect of result in the absence of relevant distinguishing adverbs (cf. Leech 1971: 34; Brinton 1988: 12). This is particularly true when telic situations are involved.²³ When translated into Chinese, the perfect of recent past is marked by the actual aspect with a past time reference.

Table 6.15. The translation pattern of the perfect of recent past

Situation type	Marked	Unmarked		Paraphrase	Total
	<i>-le</i>	<i>ganggang</i>	Null		
ACT	2	0	1	1	4
ACC	1	1	0	0	2
ACH	0	3	0	0	3
Total	3	4	1	1	9

As can be seen in Table 6.15, the translation of the perfect of recent past is quite straightforward. With the exception of one instance that is paraphrased as a noun phrase (8), all of the other examples either take *-le* or are covertly marked. The adverb *gang(gang)* “just” or similar expressions can be used to make temporal nearness explicit.

- (8) a. A 25-year-old fanatic, Yigal Amir, was outraged that
the two leaders have shaken hands [...]
- b. *yi-ge 25-sui de kuangre fenzi, Yijia'er Ami'er,*
 one-CLF 25-year GEN fanatic person, Yigal Amir,
bei zhe liang-ge lingdaoren de woshou suo
 PASS these two-CLF leader GEN shake-hand PRT
ji'nu [...]
 make-angry

The English pluperfect has frequently been considered as the “past in the past”. As such, it can be argued that the pluperfect only goes well with a past time reference. Comrie (1985:67) argues that “[s]ince the pluperfect indicates a time point before some other time point in the past, it follows that the situation referred to by the pluperfect is itself located in the past.” A situation located in the past must have been actualised, completed or mentally experienced. Therefore, in Chinese translations, the actual aspect, the completive aspect and the experiential aspect are frequently employed (either marked overtly or covertly) to present this kind of situation, as shown in Table 6.16.

It can be seen from the table that 90% of the situations referred to by the English pluperfect are presented with these three perfective viewpoints in Chinese translations,²⁴ where the past time references are normally implied in context. Sometimes adverbials such as *yuan/yuanlai/yuanben* “formerly”, *yiqian* “before”, *zai ci zhiqian* “before that” are used to make these past time references explicit. It should be noted that ILSs do not interact felicitously with the progressive *zai* while achievements are incompatible with the durative *-zhe*. The ILS taking *zai* and the achievement taking *-zhe* given in the table were shifted to activities that could take these markers. As a special case of the perfect, the English pluperfect does not rule out the possibility of situations referred to by the pluperfect being presented with an imperfective viewpoint like the progressive or the durative.

The future perfect is similar to the pluperfect except that the time reference is in the future rather than in the past. The future time reference can be

Table 6.16. The translation pattern of the pluperfect

Situ. type in Eng.	actual			com pl mkd — RVC	actual compl			experience prog			durative para		Total	
	mkd le	un neg	un mkd		mkd -le+RVC	neg +RVC	mkd -guo	un mkd	mkd zai	un mkd	mkd -zhe	un mkd		
ILS	1	4	22										27	
				1									1	
					1								1	
							2	1					3	
									1				1	
											1		1	
SLS	1		1									4	4	
													2	
											1		1	
ACT	6		11										17	
				2									2	
					3								3	
							8	5					13	
									2	1			3	
											3		3	
ACC	13		12									3	3	
				4									4	
					6								6	
							4	2					6	
ACH	25	3	32									5	5	
				25									60	
					19	3							25	
							11	1					22	
											1		1	
Total	46	7	78	32	28	3	25	9	3	1	6	0	15	253

provided explicitly by a temporal adverbial, as in (9a), or it can be given implicitly by context, as in (9b).

- (9) a. *dao 2001 niandi, jiang zai 30-ge guojia xishou*
 till 2001 year-end, will in 30-CLF country recruit
zonggong 25-wan ming zhuanmen xiaozu chengyuan,
 total quarter-million CLF special group member,

gongtong daibiao 92% de shijie hulianwang
 collectively represent 92% GEN world Internet
 user

yonghu

“By the end of 2001, a total of 250,000 panellists in 30 countries will have been recruited, collectively representing 92 per cent of the world’s Internet users”

- b. *ru Zhang dao he Aike de lianmei zhizuo neng*
 if Zhang director and Ecker GEN joint product can

huo yuqi de chenggong, na jiang zuyi

get expected GEN success, then will enough

zhengming: geju bujinjin zhishi gou Zhongguo

prove: opera not-only merely enough China

wei'er eryi

flavour PRT

“If Zhang and Ecker’s hybrid produces anything like that anticipated windfall, it will have proven more than Chinese enough”

Only three instances of the future perfect were found in our parallel corpus. All of them indicate that when situations referred to by the future perfect are translated into Chinese, the perfect meanings are lost and these situations are presented perfectly with a future time reference.

6.2.3 The perfect progressive aspect

The complex viewpoint of the perfect progressive is a combination of possible perfect meanings and possible progressive meanings. In such combinations, the most likely perfect meaning is the perfect of persistent situation, though other perfect meanings are also possible (cf. Comrie 1976:62). The progressive component in the combination gives the complex viewpoint its meaning of temporariness and incompleteness (cf. Leech 1971:44–46). Comrie (*ibid*) argues that the distribution of the progressive and non-progressive forms in the perfect is “essentially the same” as in the present tense: “the non-Progressive form must be used with stative verbs [...] while other verbs, unless habitual, will normally be in the Progressive.” This argument, however, has missed the point of the semantic differences between the perfect and the perfect progressive as observed in Leech (*ibid*). Furthermore, non-stative verbs indicating habituality can actually take the progressive form, as in (10).

Table 6.17. The translation pattern of the perfect progressive

Situation type	Perfect					Progressive		Frequency
	Marked		Unmarked			Marked	Unmarked	
	-le	Negation	yijing	yizhi	Null			
ILS			+	+			+	2
	+		+				+	1
ACT				+		+		6
	+		+				+	2
		+					+	2
ACC				+		+		1
Total								16

(10) Blumberger's been buying the bread here.

In Chinese translations, while the perfect progressive may shift towards the progressive or the perfect, depending on the situation type involved and the translator's choice of viewpoint aspect, both perfect and progressive meanings can be retained in most cases, with the perfect being lexicalised by temporal adverbs such as *yizhi* "all the time" while the progressive being signalled by the progressive marker *zai* or implied in contexts.²⁵

In our data, only the perfect of persistent situation is involved in the perfect progressive. As Table 6.17 shows, only the perfect meaning is retained with ILSs, as this situation type is strictly incompatible with the progressive. However, it is sometimes possible to use the durative marker *-zhe* to indicate the continuous/ongoing feature of a durative situation. Consider the following examples:²⁶

- (11) a. [...] *women changqi yilai yizhi yu bianxing*
we long-term since all-the-time with rogue
DNA (*qianbingdu*) *gongchu(-zhe)* [...]
DNA (provirus) live-DUR
"[...] we've been living with the rogue DNA (the proviruses) for a long time [...]"
- b. [...] *renlei he zhushu-qian-nian yilai*
human with pig several-thousand-year since
yizhi miqi xiangchu-zhe [...]
all-the-time closely get-along-DUR
"[...] people and pigs have been living in close contact for thousands of years [...]"

- c. *renlei he zhu miqi xiangchu yi you*
 human with pig closely get-along already have
shu-qian-nian zhi jiu
 several-thousand-year GEN long-time
 “[...] people and pigs have been living in close contact for thousands of years [...]”

With situation types that can take the progressive, i.e. activities and accomplishments in our data, the translator choice of viewpoint plays a role. This means that the focus can fall on either the perfect or the progressive. As far as activity and accomplishment are concerned, when the perfect progressive takes a *for*-PP (e.g. *for 3 months*), it is the translator’s choice to place the focus on the perfect or the progressive meaning. For example, (12a) can be translated as the attested version in (12b), or optionally it can be translated as (12c). Conversely, (13a) can be translated as the attested version in (13b), or it can be alternatively translated as (13c). If there is no durative adverbial, as with most cases in our data, only the translation pattern with *yizhi* and *zai* is appropriate.

- (12) a. He’s been working hard for three months drawing a plan for a new city hall.
 b. *ta yijing wei xin shizhengting de sheji tuzhi*
 he already for new city-hall GEN design drawing
manglu-le san-ge yue
 busy-ACTL three-CLF month
 c. *san-ge yue yilai ta yizhi zai wei*
 three-CLF month since he all-the-time PROG for
xin shizhengting de sheji tuzhi manglu
 new city-hall GEN design drawing busy
- (13) a. My dog has been chasing cars for years, but if he ever caught one, he wouldn’t know what to do with it
 b. *wo de gou duo-nian lai yizhi zai zhuizhu*
 I GEN dog many-year since all-the-time PROG chase
qiche, dan ruguo ta zhende zhuazhu-le yi-liang,
 car, but if it really catch-ACTL one-CLF,
jiu bu zhidao ruheshihao le
 then not know what-to-do COS
 c. *wo de gou zhuizhu qiche yijing you*
 I GEN dog chase car already have
duo-nian le [...]
 many-year COS

When the pluperfect interacts with the progressive aspect, the result is the pluperfect progressive, which signals progressiveness with a relative past time reference. While all situation types compatible with the progressive are expected to interact felicitously with the pluperfect progressive, only activities and accomplishments were found in our data.

Like the perfect progressive, the pluperfect progressive only involves the perfect meaning of a persistent situation. As such, the situations referred to by the English pluperfect progressive can be translated into Chinese with the progressive or the durative aspect unless the translator chooses to present them perfectly or a shift in situation type prohibits their taking the progressive *zai* or the durative *-zhe*. As Table 6.18 shows, four situations are presented perfectly (one marked overtly with *-le*, one by RVC, and two marked covertly) while all of the others are presented as progressive or durative. It is interesting to note that all of the four situations presented perfectly shifted from activities to ILSs or achievements and are thus incompatible with the progressive aspect, though all of these situations can be optionally translated with the progressive *zai* if the translator chooses to do so.

Table 6.18. The translation pattern of the pluperfect progressive

Situation Type	Perfect				Progressive		Durative	Frequency
	Marked		Unmarked		Marked	Unmarked	Marked	
	<i>-le</i>	RVC	<i>yizhi</i>	Null	<i>zai</i>	Null	<i>-zhe</i>	
ACT							+	1
	+							1
		+						1
			+		+			1
				+				2
ACC						+		1
Total						+		1
								8

6.2.4 The simple aspect

Simple forms in English (simple past, simple present and simple future) have been discussed extensively within the context of tense distinctions while their aspectual significance has been virtually ignored (cf. Brinton 1988: 15). It can be argued that while simple forms are not formally marked for aspect, they

convey aspectual meaning as well as tense meaning. They mark the ‘simple aspect’. Unlike the progressive, the perfect or the complex viewpoint of the perfect progressive discussed in previous sections, the simple aspect presents a situation without aspectual modification.²⁷ The simple aspect is typically used to present situations that occur once, are repeated, are habitual or are timeless. When the simple aspect interacts with tense, we have the simple past, the simple present and the simple future (see Table 6.1).

The simple past typically locates a situation in time prior to the present moment.²⁸ In the simple past, there is no distinction between single situations and habits (cf. Leech 1971: 9; Brinton 1988: 250),²⁹ though the auxiliary *used to* does unequivocally indicate a past habit. When a situation referred to by the English simple past is translated into Chinese, it is possible to present it either perfectly or imperfectly, depending on its situation type and the translator’s choice of viewpoint, because the English simple aspect does not modify a situation aspectually.

There are 3,468 instances of the simple past in our parallel corpus. To make the data manageable, we chose to study only those with a frequency of 15 or above, totalling 232 instances. As Table 6.19 shows, except for the delimitative aspect marked by verb reduplication and the continuative aspect marked by *-xiaqu*, all other basic viewpoints were found in Chinese translations.³⁰ It is also interesting to note that in our frequent data, 84.5% of the situations referred to by the English simple past are presented with a perfective viewpoint in Chinese translations. This is as expected. The English simple past normally refers to situations that completed or terminated in the past. As such, it has been sometimes been called the ‘perfective past’ in the literature (e.g. Brinton 1988: 16). While perfective viewpoints are not formally marked in English, they have to be made explicit in Chinese translations. The high frequency of perfective viewpoints in Chinese translations is closely related to the text types included in the parallel corpus, which primarily covers narrative discourse.³¹

Chinese does not formally mark habituality. The expressions for a present habit and a past habit take the same form, both unmarked aspectually, though in the case of habitual past, the past time reference is implied in contexts or made explicit by temporal adverbials. Habitual situations in the past referred to by the English simple past are, therefore, not marked for viewpoint aspect in Chinese translations.

The simple present in English normally refers to states, i.e. statements made

Table 6.19. The translation pattern of the simple past

Aspect marking in translations			ILS	SLS	ACT	SEM	ACC	ACH	Total
Actual	Mkd	-le		1	3		9	18	31
		Neg.	4		1			3	8
	Unmkd	Null	19		18		32	41	110
Completive ³³	Mkd	RVC			1		1	25	27
Actual Completive	Mkd	-le...RVC					5	11	16
		Neg...RVC	1						1
Experiential	Mkd	-guo			1		2		3
		Unmkd	Null				1		1
Progressive	Mkd	zai							0
		Unmkd	Null		2				2
Durative	Mkd	-zhe			6	1			7
		Unmkd	Null	3	5				8
Inceptive	Mkd	-qilai			1				1
Habitual	Unmkd	Null	6		6		5		17
Total			33	1	44	1	55	98	232

“for all time” (Leech 1971:2) and habitual situations,³² though it may be extended, in the right circumstances, to mark predetermined future situations, to narrate past events, and to indicate events in progress (*ibid*: 1–8; Comrie 1985: 36–41; Brinton 1988: 16). There are 144 instances of the simple present with a frequency of 15 or above in our parallel corpus,³⁴ as shown in Table 6.20. It can be seen from the table that the English simple present is most commonly used to present states whereas the instantaneous use of the simple present to refer to ongoing situations was not found in the high-frequency data we examined.³⁵ The simple present marking past accounts for a large proportion simply because of the high frequency of “verbs of communication” and of the “fictional use” of the simple present (Leech 1971: 7, 14) in our parallel corpus.³⁶

A study of frequent verbs in the parallel corpus shows that when situations taking the simple present aspect are translated into Chinese, they are most likely to be unmarked aspectually (81.94%). This is especially true when the English simple present refers to statements made for all time (90%). As far as situation types are concerned, [–telic] situations are more likely to be unmarked aspectually (96.1%) than [+telic] situations (65.67%). It should be noted, however, that aspect is simply related to the temporal shape of a

Table 6.20. The translation pattern of the simple present

Meaning	Aspect marking		ILS	SLS	ACT	SEM	ACC	ACH	Freq.	Total
State	Marked	<i>-le</i>	1				2	1	4	70
		RVC						3	3	
Habit	Unmkd	Null	43		9		5	6	63	16
	Marked	<i>-le</i>						1	1	
Past	Marked	RVC						3	3	
		Null	2		5	1	1	3	12	
	<i>-le</i>	1					2	3	44	
	RVC			1			5	6		
	<i>-le+RVC</i>					1		1		
Future	Unmkd	<i>-qilai</i>						1	1	
		Null	5	1	4	1	13	9	33	
	Marked	RVC						1	1	14
		<i>-le+RVC</i>						2	2	
		Negation						1	1	
Unmkd	Null			3		3	4	10		
Total			52	1	22	2	27	40	144	

situation and is non-deictic temporally (see section 1.1). As such, aspect markers such as *-le*, RVCs or *-qilai* can be used in past, future, or timeless situations.

The simple future refers to a future time reference. While it is debatable whether there is a formal future tense in English (cf. Comrie 1985:43–48; Biber et al. 1999:456), we will not go into this debate in this book. Rather we will only focus on how a future time reference in English is translated into Chinese. The simple future is marked by *will*, *shall* and *BE going to*. As we noted previously, the simple present can also mark a future time reference. But it should be noted that there is a basic difference between the simple present and the simple future when they mark futurity. In main clauses, the simple present can only be used with a future time reference in highly marked circumstances, i.e. where the situation in question is presented as being scheduled or predetermined, as in *The train leaves at 6* (cf. Comrie 1985:49). **It rains tomorrow* is ill-formed unless God is talking or advances in meteorology have made it possible for humans to schedule rain (cf. *ibid.*:48). In contrast, the simple future does not have such restrictions. In this book, we will only discuss the future time reference marked by the simple future. There are 242 instances of the simple future in our data,³⁷ as distributed in Table 6.21.

Table 6.21. Translation pattern of the simple future

Marker	ILS	SLS	ACT	SEM	ACC	ACH	Total	Percent
<i>-le</i>						3	3	1.24%
Modal	16	3	27	1	20	41	108	44.63%
Adverb	12		21		11	28	72	29.75%
Adv.+modal	1		2			2	5	2.07%
Unmarked	19		11		10	14	54	22.31%
Total	48	3	61	1	41	88	242	100%

Chinese does not mark tense grammatically. Future time references in Chinese are most frequently referred to by adverbials indicating futurity (e.g. *jiang/yao* “will, be going to”) or by modals like *hui* “be likely to, be sure to”, though it can also be implied in the context. When situations referred to by the English simple future are translated into Chinese, over three quarters of them take either adverbials indicating futurity and/or modals, while around one quarter do not take any marker. Futurity and mood are so closely related that the question of whether the future (as in the case of English *will*) should be considered as tense or mood is an area of debate (cf. Comrie 1985:21; Biber et al. 1999:454). As such, it is hardly surprising that a future time reference is most frequently indicated by modals. Although the actual *-le* is not restricted to a certain time reference, our data shows that *-le* goes frequently with a past time reference (20.25%) but rarely with a future time reference (1.24%). This finding is in line with Comrie (1976) who argues that *-le* in Chinese signals both perfective aspect and tense meaning of relative past.

This chapter was concerned with aspect marking in English and Chinese, using the unified aspect model developed in the previous chapters. We first contrasted the distribution of aspect markers across fifteen text categories in Chinese and British/American English based on a corpus of Mandarin Chinese and two English corpora. We also explored how morphologically combined aspect/tense markers in English are translated into Chinese on the basis of an English-Chinese parallel corpus. The discussion in this chapter shows that the aspect model presented in this book has not only provided an explanatorily adequate account of aspect in Chinese, it is also a useful framework for contrastive language study (see section 6.1) and translation research (see section 6.2). In the concluding chapter that follows, we will summarise the findings of the research undertaken in this book and explore how the aspect model developed here can be extended.

Notes

1. The term ‘tense’ here refers to what Comrie (1985, 1999) calls ‘absolute tense’, which uses the present moment as the reference time. There are different characterisations of the absolute tense system in English. Comrie (*ibid*) notes that there are three tenses: ‘present’, ‘past’ and ‘future’ whereas Biber et al. (1999:453) maintains that there are only two tenses, namely present and past while future time is typically marked by modal or semi-modal verbs like *will*, *shall* and *BE going to* (see section 6.2.4 for further discussions of futurity).
2. Readers can visit the corpus website (see section 1.3) to find out how to explore the corpus using *Xaira* or *WebConc*.
3. Readers who wish to reduplicate this case study must note that (1) *had* as an auxiliary should not be counted as the simple past form of *HAVE* and (2) the perfect does not include the perfect progressive, which is counted separately. We used *WordSmith* version 3 to extract the required frequency data from FLOB and Frown. Simple past forms include (1) all past forms of a lexical verb, verbs *DO* and *BE*; (2) all instances of the past form *had* (including the contracted form) not followed by a past participle within a four-word range to the right of the search word. Perfect constructions include all morphological forms of *HAVE* (except *having*) followed by 0–2 words and then by a past participle, but not followed by a present participle within a four-word range to the right of the search pattern. The progressive forms (including the perfect progressive) can be extracted using the search pattern of all forms of verb *BE* followed by 0–2 words and then the present participles of all verbs.
4. The narrative vs. expository distinction “might also be considered as distinguishing between active, event-oriented discourse and more static, descriptive or expository types of discourse” (Biber 1988:109). Narrative discourse is basically event-oriented whereas expository discourse has an informational focus. See Biber (1988) for a discussion of the relation between discourse functions and linguistic features.
5. For one degree of freedom, the calculated score must be greater than 3.84 (i.e. the significance level $p < 0.05$) for a difference to be statistically significant. The critical value for the significance level $p < 0.001$ is 10.83.
6. As the aspect and tense markers in English combine morphologically, English typically registers a considerably higher frequency of aspect/tense markers than Chinese. In terms of proportions, however, aspect markers are more common in Chinese for categories G and K but less frequent in N, L, H, and E (see Table 6.6).
7. The calculations in Table 6.6 are based on standardised frequencies (per 10K words). To save space, we only give here the results of, not the process of deriving, the statistical tests. The following example shows how these values were obtained. To calculate the LL score of text category A in LCMC and FLOB, for example, we first found the standardised frequency of aspect markers in category A in LCMC (i.e. 175) and FLOB (i.e. 587). Then we subtracted these frequencies from the overall standardised frequency of aspect markers in LCMC (i.e. 2,409 minus 175) and FLOB (8,758 minus 587) to obtain the standardised frequency of aspect markers in other categories. The LL score 0.925 was obtained by cross tabulating the four frequencies.

8. Over 70% of instances of quotations in FLOB and Frown are found in the five types of fiction and humour (76.78% in FLOB and 70.36% in Frown). In terms of the frequency of quoted words, 48.29% in FLOB and 45.08% in Frown are found in the six categories. We also found a positive correlation between the frequency of imperfective markers and the number of quoted words. In FLOB there are 1,161 markers in 232,376 words in quotations and 2,913 markers in 767,624 words not in quotations, with an LL ratio of 59.99 and a significance level less than 0.001. In Frown, there are 1,346 markers in 246,749 words in quotations and 2,511 markers in 753,251 words not in quotations, with an LL ratio of 199.83 and a significance level less than 0.001. Category N (adventure and western fiction) is peculiar in that unlike other fiction types, British English registers a significantly greater proportion of imperfective markers over American English in this category. It might be speculated that adventure and western fiction may focus on action more than dialogue. But the data in FLOB and Frown proves that this is not the case. In FLOB the average frequency of quotations in the six categories (five fiction types plus humour) is 198 instances per 10,000 words (12.78%) whereas the normalised frequency of quotations in category N is 260 (16.68%). In Frown the average frequency of the six categories is 202 instances per 10,000 words (11.73%) whereas the normalised frequency of quotations in category N is 252 (14.62%). The apparently anomalous nature of category N begs further investigation.

9. In English, verbs in finite clauses are marked for either tense or modality, but not for both (cf. Biber et al. 1999:253). Note, however, that while *will*, *shall* and *BE going to* are treated as modal verbs in Biber et al. (*ibid*:456), they are considered as markers for the simple future in this book (cf. also Comrie 1999), as in many instances, futurity and modality are hardly distinguishable (Comrie 1985:21).

10. The counts in the table do not include the copular verb *BE*. That explains why the proportion of the simple aspect in our data is slightly lower than 90%, the proportion reported in Biber et al. 1999:461).

11. The numbered examples in section 6.2, unless stated otherwise, are cited from the English-Chinese parallel corpus and the FLOB corpus used in this book.

12. The count does not include the complex viewpoint of the perfect progressive, which will be discussed in section 6.2.3.

13. In the parallel corpus, we did find four individual-level states taking *-zhe* or *zheng*, and one achievement taking *zheng* (note that achievement is strictly incompatible with the durative *-zhe*), none of these situation types was found to take the progressive *zai*.

14. This is not the only use of the future progressive, though, as Leech (1987) observes, in everyday speech the future progressive “is often a more polite and tactful alternative to the non-progressive form.”

15. Boyland (1995) presents corpus data to show that in structures like *would + have + past participle*, *have* is becoming more tightly bound to *would* than the past participle.

16. This count does not include the perfect progressive, which will be discussed later in this section.

17. While accomplishments are in principle compatible with the perfect meaning of

persistent situation, the frequency of such occurrences is expected to be extremely low (and no instance is found in our parallel corpus), because telic situations go more naturally with the perfect of perfective types.

18. The durative aspect marker *-zhe* is intrinsically incompatible with achievements. But in the translation pair involved (*It has come to define not only a city, but an entire nation and continent* vs. *ta yijing bujinjin biaozi-zhe yi-zuo chengshi, erqie xiangzheng-zhe yi-ge guojia he yi-ge dazhou*), there is a shift in situation type from an achievement to an ILS in the Chinese translation.

19. Accomplishments in the English source data first underwent a situation type shift to achievements when RVCs were used (cf. section 3.4.1).

20. As the perfect of result presents the result of a preceding situation, it is quite natural for the situation presented to shift to an ILS. In fact, the perfect of result has sometimes referred to as “stative perfect” (e.g. Moens 1987: 101).

21. Dahl (1985) notes that there are at least four types of periphrastic constructions for the perfect: 1) copular plus past participle (e.g. Hindi and Bulgarian), 2) auxiliary *HAVE* plus past participle (e.g. most Germanic and Romance languages), 3) main verb plus particle *already* (e.g. Yoruba and Isekiri) and 4) constructions historically developed from the verb meaning *finish* or *throw away* (e.g. Sango and Ewe).

22. Of the 13 instances of ILSs taking the perfect of persistent situation, five underwent a situation type shift from ILSs to achievements taking *-le* in Chinese translations to indicate the perfect of result.

23. Atelic situations do not have a final spatial endpoint and are thus irrelevant to the perfect of result.

24. The actual *-le* has sometimes been argued to indicate both the perfective aspect and relative past time reference (e.g. Comrie 1976:58) while the experiential aspect is often referred to as the aspect of “indefinite past” (e.g. Chao 1968).

25. If no conflict occurs in the interaction between situation aspect and viewpoint aspect, the progressive marker *zai* can actually be added (as indicated in brackets) to covert progressives. There are two such examples in our data: *ta yizhi (zai) dui ni shuo, zhexie shi ta xie de* “He has been telling you he wrote them” and *ta yizhi (zai) cong zhenmin jia zhong daoqie caiwu* “he has been stealing from houses in the town”.

26. In this pair of examples, (11a) and (11c) are attested while (11b) is an alternative to the original translation given in (11c). As we will discuss shortly, there are different ways to translate the perfect progressive taking a *for*-PP.

27. Hatcher (1951:259–260) argues that the simple form has no aspectual meaning and is indifferent to aspect.

28. In everyday conversation, the simple past can also refer to the speaker’s present state of mind to make a request tentative and thus more polite (cf. Leech 1971:11; Biber et al. 1999:454). But this extension of the simple past is restricted to conversation and was not found in our data with high frequency (i.e. with a frequency of 15 or above).

29. The former is referred to as the ‘unitary past’ and the latter as the ‘habitual past’ in Leech (1971:9).
30. The absence of these viewpoint aspects in the frequent data does not exclude the possibility of them occurring in the low-frequency data.
31. Perfective viewpoints normally appear in foregrounded clauses to carry the narration forward, while imperfective viewpoints often show up in backgrounded clauses to provide background information (cf. Hopper 1979:221; Christensen 1994).
32. This category may include timeless situations, general truth, generic situations, proverbial occurrences and scientific, mathematical and geographical statements.
33. One instance of ILS, one activity and six accomplishments were shifted to achievements when an RVC was attached to them, because RVCs not only perfectivise a situation but also contribute to situation aspect (see section 3.4.1).
34. The figure does not include words of other parts of speech that were incorrectly tagged as VV0 or VVZ, nor does it include the 19 instances of imperatives in which verbs are tagged as VV0.
35. One instance of this kind is found in our low-frequency data: *Here come the Jewels* vs. *Zhu E'er yi-jia ren lai le*. The most natural way to express this meaning in Chinese, as the translation shows, is to use the COS *le*.
36. A reporting verb (e.g. *SAY* and *TELL*) referring to the initiation of a message in the past can take the simple present form because “the verbal meaning has been transferred from the initiating end to the receiving end of the message. The communication is still in force for those who have received it” (Leech 1971:7). In literary works, novelists or story-tellers may narrate past or imaginary happenings with the simple present, implying that they are going on at the present time. The effect is to achieve dramatic heightening (cf. *ibid*:6, 14).
37. The count does not include incomplete structures like *Probably it will*, *Dr. Brock replied* and *But you'll always get that one who won't*.

CHAPTER 7

From the study of aspect to contrastive grammar

In this book we have developed an aspect model focused on Mandarin Chinese. As the model was developed and tested using corpus data, the work presented here has been able to overcome the inaccuracies and biases inherent in the previous intuition-based research on aspect, thus providing a more accurate and comprehensive account of aspect in Chinese. In addition, this book also contrasted aspect marking across various text categories in Chinese and the two major varieties of English and explored the Chinese translation patterns of English aspect/tense markers. In this concluding chapter, we will summarise the findings of the research undertaken in this book (section 7.1) and explore how the aspect model developed here can be extended (section 7.2). Section 7.3 concludes the book.

7.1. Findings of our research

Our findings relate to the following areas: methodology, aspect theory and Chinese linguistics.

7.1.1 Methodology: the corpus-based approach to linguistics

This book has sought to achieve a marriage between theory-driven and corpus-based approaches to linguistics through a study of aspect in Mandarin Chinese. The use of corpus data as an input to the semantic analysis of aspect represents something new. Previous approaches to the semantics of aspect have not always used corpus data. Yet the marriage of the corpus-based approach and traditional semantic analysis has enabled this book to produce a more realistic account of situation aspect and viewpoint aspect in Mandarin Chinese in a way that has not been attempted previously. As such, we believe that the book is a powerful demonstration of the way in which corpus data may lead to more accurate linguistic descriptions and hence theories.

7.1.2 Aspect theory

The two-level model of situation aspect presented in chapter 3 represents an extension of Smith's (1997) aspect theory. In this book, situation aspect is modelled as verb classes at the lexical level and as situation types at the sentential level. The two-level model of situation aspect was motivated by the deficiencies of Vendler (1967) and Smith (1997). The Vendlerian approach works well at the lexical level, but not at the sentential level. Conversely the approach of Smith (1997) works well at the sentential level but not at the lexical level. Our two-level approach to situation aspect has sought to bridge this gap, operating at both the lexical (section 3.3) and sentential levels (section 3.5). Our two-level approach has been made possible by the introduction of the notion of 'neutral context' (see section 3.3) and two new parameters, namely [\pm result] and [\pm bounded] (see section 3.2), which make a distinction between final temporal and spatial endpoints. While the two-level model of situation aspect has given a better account of the compositional nature of situation aspect by proposing a set of rules mapping verb classes at the lexical level onto situation types at the sentential level (section 3.4), it has also provided a more refined classification of situation aspect, most notably by distinguishing between individual-level states (ILSs) and stage-level states (SLs). In addition, the exploration of viewpoint aspect in Chinese (chapters 4–5) and the cross-linguistic contrast of aspect marking in English and Chinese (chapter 6) have shed new light on the interaction between situation aspect and viewpoint aspect cross-linguistically.

7.1.3 Chinese linguistics

By giving a corpus-based account of aspect in Mandarin, the work presented in this book has contributed greatly to Chinese linguistics in at least three ways.

First, while previous research on aspect in Chinese has typically been limited to a few viewpoint aspect markers, this book has given a detailed account of both components of aspect in Chinese. This difference is more than cosmetic, as if you have a good knowledge of the internal structure of a situation, in addition to the different viewpoints available for you to choose from, you will be able to achieve a special effect you may desire by presenting the situation as a full view or a close-up of its outward appearance or its internal

structure. Furthermore, examining both components of aspect helps to explain the interaction between situation aspect and viewpoint aspect, e.g. why some aspect markers are incompatible with some situation types while other aspect markers show a preference for other situation types.

Second, even if we take viewpoint aspect alone into consideration, previous studies of aspect in Chinese are far from being comprehensive. Although a number of aspect markers like *-le*, *-zhe* and *-guo* have been studied for decades, the way in which the language conveys viewpoint aspect systematically has largely remained an unexplored area. This book has identified eight viewpoint aspect markers (see chapters 4–5) on the basis of a sufficiently large sample of attested language data and has discussed the characteristic features of each of them in exhaustive detail. Barring the three aspect markers mentioned above, the aspectual values of the others have been overlooked in most research to date. For example, while RVCs were found in this book to be the most productive perfective markers indicating the completiveness of a situation (cf. section 4.1), their aspectual meanings have rarely been discussed elsewhere. While cursory discussions of some of these markers can be found scattered around a number of studies, they have mostly been misunderstood. Kang (1999: 223–243), for example, correctly treats *-qilai* as an aspect marker, yet she conflates its resultative and completive meanings together with its inceptive meaning. The current work has overcome these problems and defined the meaning and form of each aspect marker, thus giving a consistent account of viewpoint aspect in Mandarin Chinese.

Third, even with the three most studied aspect markers the studies to date have left a lot of unsolved problems. For example:

- Should the actual *-le* be distinguished from the COS *le* and the modal particle *le*? (see section 4.1.1)
- Does the actual *-le* indicate the termination or completion of a situation? (see section 4.1.2)
- Does the actual *-le* interact with stative and atelic situations? (see section 4.1.3)
- Should the COS *le* be covered in a study of aspect in Chinese? If so, what is its aspectual meaning? (see section 4.1.7)
- Is it necessary to distinguish between the experiential *-guo* and the RVC *guo*? (see section 4.2.1)
- Does *-zhe* indicate resultativeness or durativeness? (see section 5.1.2)

- How should the interchange between *-le* and *guo* be accounted for? (see section 4.2.1)
- Under what conditions is *-le* interchangeable with *-zhe*? (see section 5.1.7)

All of these problems and questions have been addressed by this book, and answers proposed to them.

7.2. Extending the aspect model

In developing the aspect model presented in this book, we found that many grammatical categories in English and Chinese are potentially related to aspect. They typically encompass the following: predicates; arguments; determiners and classifiers; adverbials; time words, localisers and prepositions; negation; *ba*, *bei*, *de* and *shi* structures and serial verb constructions; aspect markers and temporally/aspectually related particles. The listed categories, while not exhaustive, form the core of a grammar. As tense/aspect is a central distinction between English and Chinese, this list reflects important differences between the two languages. We also found that while the semantic functions of these categories in the two languages are quite similar, they differ considerably morphologically and/or syntactically. For example, while internal arguments in both English and Chinese play an important role in determining the telicity value of a situation (see section 3.4.2), nouns in Chinese do not inflect themselves to reflect the singular/plural distinction as happens in English. While Chinese has aspect markers signalling different viewpoint aspects, English combines tense and aspect markers morphologically/syntactically. These findings suggest that aspect can be studied in a much broader context than covered in this book and on a contrastive basis.¹ While this book has covered a much broader scope of grammatical categories than previous research on aspect, the potential contributions of many other grammatical categories to aspect remain largely unexplored. Negation, for example, has not been considered in previous accounts of aspect. Yet negation may influence aspectual meaning in both English and Chinese. Perhaps more importantly, the role of *for/in*-PPs in aspect theory has never been fully explored, though their influence on aspect is accepted. Ever since Vendler (1967: 101), the compatibility test with *for/in*-adverbials has been in operation as a diagnostic for determining the telicity value of a situation (see section 3.2.3). A [–telic]

situation is compatible with a *for*-adverbial (1a) whereas a [+telic] situation is compatible with an *in*-adverbial (1b).

- (1) a. [...] she *had worked for ten days*.
 b. Lizzie was on her feet and *had it wrenched open in an instant*.
 c. [...] he *hadn't worked in six months*.
 d. * [...] he *had worked in six months*.
- (2) a. County fire crew *answered at least 18 false alarms within 48 hours*
 [...] *answered*
 b. Aundrém *did not answer for a while*; he just stared bemused at the other.
 c. Jesús Zuniga *answered* in Spanish, going on *for a minute or more*.
 d. She *combed her hair for/in five minutes* (Dowty 1979:61).
- (3) a. I *hadn't been down there in a while* [...]
 b. *There will be four debates in nine days*, starting Sunday in St. Louis.
 c. *The list *is impressive in five minutes*.

Clearly, the situation in (1a) is [-telic] whereas that in (1b) is [+telic]. Similarly, *ANSWER* in (2) is an accomplishment verb; it occurs with an *in*-adverbial felicitously (2a). Yet how can the felicitous examples in (1c/2b) and the unacceptable example in (1d) be accounted for? It is true that a *for*-PP may trigger a situation type shift from a core-level accomplishment to a derived activity at the clause level (see section 3.4.3), as shown in (2c-d). But to what extent may negation interact with an adverbial to alter aspect? Both (2b) and (2c) can take a *for*-adverbial felicitously, but does negation trigger a difference in the aspectual meaning of the two sentences?

While we do not have a ready answer for the first question at this moment, the contrast between (1c) and (1d) indicates that the felicity of (1c) is clearly related to negation. We can only speculate that negation may coerce a [+dynamic] situation into a [-dynamic] situation, as shown by the contrast of (2b-c). The difference between (2b) and (2c) appears to be relatively clear. In (2c), *answered* is an accomplishment at the core level, but it is coerced into a derived activity by *for a minute or more* at the clause level. The time frame specified by the *for*-PP applies to the derived activity, which is [+dynamic] and [-telic]. In contrast, the time frame specified by the *for*-PP in (2b) applies to a [-dynamic] situation, namely *did not answer*.

This speculation, however, raises as many problems as it solves: why can some [-dynamic] situations (e.g. 1c and 3a-b) take an *in*-PP felicitously while

others cannot (e.g. 3c)? Can the dichotomy of individual-level and stage-level states proposed in this book account for this difference? Questions such as these are trenchant and beg further research. They must be addressed in a contrastive context in large part because these questions are relevant not merely to English but to other languages also, notably Mandarin Chinese, as illustrated by example (80c) in section 4.2.

7.3. A final remark

Writing a book on aspect in Chinese is an *accomplishment*, and finishing the book is an *achievement*. The book-writing event has an inherent final spatial endpoint. However, doing research on aspect is an endless *activity*. We hope that the work presented in this book will serve as a starting point for further research that will lead to a deeper and broader understanding of aspect in particular and Chinese linguistics in general.

Note

1. A research project, which is supported by the UK ESRC (Award Reference RES-000-23-0553), has been initiated at Lancaster University to contrast aspect-related grammatical categories in English and Chinese, using the three comparable L1 language corpora described in section 1.3 as well as a spoken corpus of Mandarin Chinese.

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