國立清華大學

碩士論文

題目：論「著」— 其時貌和形態句法分析
Aspectual and Morphosyntactic Status of -zhe

所別：語言學研究所

學號姓名：874703 舒志翔 Chih-hsiang Shu

指導教授：蔡維天博士 Dr. Wei-tien Dylan Tsai

中華民國九十二年六月
博碩士論文授權書
（國科會科學技術資料中心版本 92.2.17）

本授權書所授權之論文為本人在 清華大學（學院）語言所
91 學年度第二學期取得碩士學位之論文。

論文名稱：「論著－其時貌和形態句法分析」

同意 □ 不同意（政府機關重複上網）

本人具有著作財產權之論文全文資料，授予行政院國家科學委員會科學技術資料中心、國家圖書館及本人畢業學校圖書館，得不限地域、時間與次數以微縮、光碟或數位化等各種方式重製後散布發行或上載網路。

本論文為本人向經濟部智慧財產局申請專利（未申請者本條款請不予理會）的附件之一，申請文號為：__________，註明文號者請將全文資料延後半年再公開。

同意 □ 不同意（圖書館影印）

上述授權內容均無須訂立讓與及授權契約書。依本授權之發行權為非專屬性發行權利。依本授權所為之收錄、重製、發行及學術研發利用均為無償。上述同意與不同意之欄位若未勾選，本人同意視同授權。

指導教授姓名： 蔡維天教授
研究生簽名： 舒志翔 學號：874703

（親筆正楷）（務必填寫）

日期：民國 92 年 6 月 20 日

   或至 http://www.stic.gov.tw 首頁右下方下載）請以黑筆撰寫並影印裝訂於書名頁之次頁。
2. 授權第一項者，請確認學校是否代收，若無者，請個別再寄論文一本至台北市 (106-36)和平
   東路二段 106 號 1702 室 國科會科學技術資料中心 王淑貞。（本授權書諮詢電
   話：02-27377746）
3. 本授權書於民國 85 年 4 月 10 日送請內政部著作權委員會（現為經濟部智慧財產局）修正定
   稿，89.11.21 部份修正。
4. 本案依據教育部國家圖書館 85.4.19 台（85）圖編字第 712 號函辦理。
國立清華大學碩士學位論文
指導教授推薦書

學系
語言學研究所
舒志翔

論「著」—時貌和形態句法分析（題目），

經由本人指導撰述，同意提付審查。

指導教授

中華民國 2003 年 5 月 16 日
國立清華大學碩士學位論文

考試委員審定書

學 系
語言學
研究所 舒志翔
君所提之論文

論「著」—時貌和形態句法分析 (題目)

經本委員會審查，符合碩士資格標準。

學位考試委員會
主持人

委員

中華民國 92 年 5 月 16 日
論「著」—其時貌和形態句法分析

舒志翔
國立清華大學 語言學研究所

摘要

漢語時貌標誌「著」的研究一直脫離不了許多複雜並且互不相關的語意特徵的分析。語言學家到目前爲止並未能爲這些特徵提出有系統的解釋，而往往只能提出互不相關的特徵，比如未完成時貌標誌、持續貌標誌、狀態標誌、結果狀態標誌、 [+附著]動相標誌、非進行貌標誌、敘述性文體時貌標誌，以及狀語子句標誌等。要釐清這些混亂的語意和語法特徵，勢必須要一個詳盡的形態句法分析。本篇論文根據木春英樹 (1983) 等學者的看法，提出兩個形態句法形式的「著」：動相標誌「著」和時貌標誌「著」。同時，更進一步分析不同「著」的語意特徵以及形態句法上的分布。經由這些分析，我們也能推導出爲何不同的結構位置的「著」會有不同的語意。

另外，本篇論文討論「著」的一個重要特徵：「著」無法按時致產生聯繫。這個特徵比靜態標誌的分析更能捕捉到語言的事實。

(1) ?? 他吃著飯
(2) 他一邊吃著飯，一邊看著書
(3) 老闆拍著桌子罵人

本文認爲(1)句之所以不好是因爲「著」無法和時制產生聯繫。至於其他句子之所以是好句子則是因喪懺中的其他成分可以和時制產生聯繫。這個時制聯繫的特徵將會在本文的最後一章廣泛的討論。其對時制和時貌的句法和語意理論有極大的重要性。
Aspectual and Morphological Status of \(-zhe\)

Chih-hsiang Shu
Graduate Institute of Linguistics
National Tsing Hua University

Abstract

The aspectual marker \(-zhe\) has many puzzling and seemingly non-related properties in the literature. Linguists by far have not gain much insight into these properties so they are generally disjunctively defined in the literature: imperfective marker, durative marker, stative marker, resultative marker, phase marker with attachment meaning, aspectual markers with non-progressive meaning, aspectual markers that appear most often in narrative discourses, and an adverbial clause marker. To give all the functions of \(-zhe\) a uniformed account, a thorough morphosyntactic analysis is necessary. Following Kimura (1983) and others, I propose that there are at least two morphosyntactic forms of \(-zhe\): the phase marker \(-zhe\) and the aspectual marker \(-zhe\). I will then define each morpheme in terms of their semantic features and examine how the different feature specifications of these two forms of \(-zhe\) accounts for their distinct morphosyntactic properties, and how the various seemingly unrelated properties can be accounted for uniformly.

In addition, this thesis focuses on a key property of the aspectual \(-zhe\): its inability to anchor tense. This property better account for the seemingly stative-like properties accounted for in the literature.

(1) \(\text{Ta chi-zhe fan.}\)  \(\text{He eat-ZHE meal.}\)
(2) \(\text{Ta yi-bian chi-zhe fan, yi-bian kan-zhe shu.}\) \(\text{He one-side eat-ZHE meal one-side look-ZHE book.}\)
(3) \(\text{Laoban pai-zhe zhuozi ma ren.}\) \(\text{The boss, pounding the table, scolded someone.}\)

I propose that the unacceptability of (1) follows from the inability of \(-zhe\) to anchor to tense. The acceptability of other sentences is the result of elements that are capable of ‘tense anchoring’. This tense anchoring property will be discussed extensively in the final chapter, which has important consequences on the syntactic and semantic theories of tense and aspect.
誌謝辭

我有幸在寫作過程中，得到許多老師的指導。我的指導老師蔡隆天老師，也是我的啟蒙老師，給我奠定了最根本的語言學研究方法以及整個科學方法的基礎。對我的研究方法及心態上的指點，他總是不吝給我中肯的指導和提醒。口試委員之一的林慶老師，是引領我進入語言時貌以及時制系統堂奧的啟蒙老師。老師研究分析漢語、南島語，以及藏緬語句法的功力和活力，也讓我真正見識到一個專心投注於語言學研究的學者掌握語言各個層面的大師風範。遲金發老師也是我的啟蒙老師，他對於詞義語意的深入分析，以及對語言結構和語意間根本觀念的紮根，使我做句法研究時，能時時記得從不可或缺的語意面向來看待問題。遠從政治大學趕來為我口試的賴惠玲老師，在口試當天給我很多寶貴的意見和指正，使我的論證組織更為精密，也加深了我對時貌觀念的了解。林宗宏老師在某些我所疏忽的地方，像是方言的比較，提供給我不少寶貴的意見。交通大學的林若萱老師，新加坡國立大學的陳重瑜老師都把他們所要發表或是已發表的文章寄給我，對我論文的幫助極大。同時，我也十分感謝在我碩士生涯中所有給我語言學研究上啟發的老師，包括曹達東老師、王旭老師、張月琴老師、黃慧娟老師，以及湯恩真老師，沒有他們的諄諄教誨，我不會有今天。
Table of Contents

Chinese Abstract .................................................................................i
English Abstract ..............................................................................ii
Acknowledgement ...........................................................................iii
Table of Contents ............................................................................iv
Abbreviations ..................................................................................v

Chapter 1 Introduction .....................................................................1
1. Basic properties and contentious issues ......................................1
   1.1 Imperfectivity .................................................................1
   1.2 Durative marker ................................................................2
   1.3 Dynamic/stative duality .....................................................3
   1.4 Resultative marker ..........................................................3
   1.5 Attachment ......................................................................4
   1.6 Non-progressive .............................................................4
   1.7 Descriptive function ........................................................5
   1.8 Subordinate function .......................................................5
2. Basic approaches and goals .........................................................6
3. Outline ......................................................................................6

Chapter 2 Morphosyntactic Distribution ........................................8
0. Introduction ................................................................................8
1. Morphological status ...............................................................10
2. Syntactic distribution ...............................................................15
   2.1 V-zhe in locative existential sentences ..............................15
      2.1.1 LE sentences with three-place placement predicates ......17
2.1.2 LE sentences with two-place painting predicates ......................... 18
2.1.3 LE sentences with one-place posture predicates ......................... 19
2.1.4 LE sentences with two-place activity predicates ......................... 20
2.1.5 LE sentences with one-place motion predicates ......................... 21
2.1.6 How is –zhe related to locative inversion? ............................ 21

2.2 V-zhe as the canonical main predicate ....................................... 24
2.3 V-zhe in imperative and subjunctive sentences ............................. 25
2.4 V-zhe that selects a non-finite clausal argument .......................... 26
2.5 V-zhe in adverbial clauses ...................................................... 27
2.6 V-zhe in serial verb and juxtaposition-of-events constructions ........... 29

3. How many forms of –zhe are there? ........................................... 30

3.1 Arguments from morphosyntactic diagnostics supporting two –zhe .. 30
3.2 Two-zhe analysis vs. one-zhe analysis ....................................... 32
3.3 How do we distinguish between -zhe
     and -zhe\_A? ................................................................. 33
3.4 Arguments from two distinct uses of verbal suffix –le ................... 34
3.5 Arguments from Cantonese and diachronic perspective .................. 35

4. Conclusion .................................................................................. 37

Chapter 3 Semantic Interpretation ............................................... 38

0. Introduction ................................................................................. 38
1. Basic notion of aspects and level of aspects .................................... 38
2. Chinese aspectual systems ......................................................... 43
3. The selection restrictions and aspectual status of –zhe ..................... 44
3.1 \(-zhe_{\text{p}}\) \(-zhe\) as a phase marker .............................................. 44

3.1.1 Reference time is not encoded semantically ......................... 47
3.1.2 Dynamicity ................................................................. 48
3.1.3 \([-\text{Active}]\) or \([+ \rightarrow \text{Active}]\) ........................................ 49
3.1.4 Durativity – defining feature ............................................ 52
3.1.5 Telicity ........................................................................ 52

3.2 \(-zhe_{\text{A}}\) \(-zhe\) as a aspectual marker ...................................... 53

3.2.1 Reference time is encoded semantically \(\text{(Imperfective marker)}\) ...... 53
3.2.2 \([\pm \text{active}]\) ................................................................ 56
3.2.3 Durativity – defining feature .............................................. 56
3.2.4 Telicity ........................................................................ 57

3.3 How do we distinguish between \(-zhe_{\text{A}}\) and \(-zhe_{\text{p}}\) in a given sentence? .......... 60

4. \(-zhe_{\text{A}}\) vs. \(zai\) ................................................................. 61

4.1 \([\pm \text{imperfective}]\) .................................................................. 62
4.2 Incompatibility with \([-\text{durative}]\) verbs ...................................... 63
4.3 \([\pm \text{active}]\) ..................................................................... 63
4.4 Habitual meaning and fuzziness and durativity .............................. 64
4.5 Tense .............................................................................. 65

5. Other semantic properties of \(-zhe\) ................................................. 66

6. Conclusion ........................................................................ 67

Chapter 4 Tense Interpretation and Syntactic Structure of Sentences Inflected by
\(-zhe\) ..................................................................................... 68

0. Introduction ........................................................................ 68

1. Tense anchoring and ‘completeness’ in \(-zhe\)-inflected sentences .......... 70

1.1 Locative existential sentences .................................................. 70
1.2 Sentence-final modal particle *ne* .............................................. 71
1.3. Sentence marked by certain manner adverbs ............................. 72
1.4. The *yibian*. *yibian* construction and serial verb constructions ........ 72
1.5 Non-main verbs that are suffixed by *-zhe* and some idiomatic constructions ................................................................. 73
2. *-Zhe* vs. *zai* in tense anchoring ............................................ 73
3. Tense anchoring and phrase structure ........................................... 75
   3.1 Sentences marked by the progressive marker *zai* ...................... 77
   3.2 Incomplete sentences marked by *-zhe* ................................... 78
   3.3 Sentences with MP *ne* .................................................... 78
   3.4 LE sentences ..................................................................... 79
   3.5 Sentences with manner adverbs .............................................. 80
   3.6 *yibian* sentences ............................................................ 81
   3.7 Imperative and subjunctive sentences ..................................... 82
4. Conclusion .................................................................................. 82

References .................................................................................... 85
Abbreviations

Cl: classifier,
Dur: durative marker,
Exi: existential marker,
Exp: experiential aspect,
MP: sentence-final modal particle
Impfv: imperfective aspect,
Loc: locative preposition,
Neg: negation marker,
Pft: perfect marker,
Pfv: perfective marker,
p.n.: personal name,
Prt: sentence final particle,
Poss: possessive marker,
Prog: progressive marker,
Re: relativization marker,
RIt: resultative/extent marker,
ZHE: imperfective/ durative marker
Chapter One

Introduction

This thesis is a study of the semantic aspectual status and syntactic behaviors of the aspectual morpheme \(-zhe\) in Taiwan Mandarin Chinese. The seemingly manifold syntactic and semantic behaviors of this morpheme in different occurrences will be extensively investigated, and the issue whether assorted properties of \(-zhe\) should be treated as behaviors of distinct homonymic morphemes or a single morpheme with various incarnations will then be addressed. I will then focus on the grammaticalized usages of \(-zhe\) and examine its semantic/syntactic status. This thesis aims to clarify the troubled state of affairs in previous studies, pinpoint their fallacies, and construct a simple and precise account of aspectual properties of \(-zhe\) on the basis of extensively collected data and Chinese syntactic properties. Throughout the thesis I will adopt the generative grammar framework.

1. Basic properties and contentious issues

In this thesis I will examine the aspectual status of \(-zhe\) from a morphosyntactic and semantic perspective. There are numerous papers and theses addressing the various usages and behaviors of this morpheme. The analyses proposed in the literature are profuse, but also rife with either conflicting or loose generalizations. In this section I will give a brief overview of some of the most prominent properties of \(-zhe\). These prominent properties are generally disjunctively defined in the literature with little interconnections established between them.

1.1 Imperfectivity

First, \(-zhe\) is analyzed as an imperfective marker. The diagnostics of atelicity is
most often employed to support this line of analysis. Sentences containing telic elements are not compatible with -zhe:

(1) a. Xiaoli zhuanxinde  xie-zhe xin
    p.n. absorbed  write-ZHE letter
    ‘Xiaoli wrote a letter with concentration.’

    b. *Xiaoli  xie-hao-zhe xin.
    p.n. write-Rlt-ZHE letter

In sentence (1b), the resultative marker -hao explicitly marks the action as complete. Since a defining property of imperfectivity is its “explicit reference to the internal temporal structure of a situation,” (Comrie 1976: 24) a situation in a sentence marked as complete cannot have imperfective aspect, hence the ungrammaticality of (1b). In later chapters I will redefine the notion of imperfectiveit in terms of syntax.

1.2 Durative marker

-Zhe is often analyzed as a durative marker. This feature is closely connected with imperfectivity. Since imperfective markers make reference to the internal makeup of a situation, the situation is naturally durative in order to make this reference possible. This property is salient when verbs with punctiliar reading are suffixed by -zhe. In this case, they are imposed with iterative reading to accommodate both the punctiliar reading of the verb and the durative feature of -zhe, as is illustrated in (2):

---

1 I do not always translate -zhe into English progressive ‘be + -ing’ because -zhe is not a progressive marker and English imperfective situations are not always expressed by progressives. See Chen (1980) for a comparison between -zhe and English progressive.
(2) Xiaoli qiao-zhe etou, zai xiang xinshi

p.n. knock-ZHE forehead Prog think thought

‘Knocking on his forehead (iteratively), Xiaoli is dwelling on his thoughts’

1.3 Dynamic/stative duality

Some linguists categorize –zhe as a stative marker, which can only co-occur with States (Smith 1991. Yeh 1993). However, it is also noted by many scholars that –zhe can co-occur with both States and Activities a la Vendler (1957). The misleading claim that –zhe is a stative marker is due to the existence of the progressive marker zai. Since –zai plays a predominant role in Mandarin dynamic imperfective or progressive situations, the limited co-occurrences of –zhe with dynamic situations are often ignored. I will discuss the complex patterning of this duality in the main text. The following sentences illustrate a case of aspectual duality of –zhe; (3a) is dynamic, (3b) is stative:

(3) a. Xiaoli zai qiang shang gua-zhe xua

p.n. Loc wall on hang-ZHE picture

‘Xiaoli is hanging a picture up on the wall.’

b. qiang shang gua-zhe yi-fu hua

wall on hang-ZHE one-CL picture

‘A picture hangs on the wall.’

1.4 Resultative marker

Under certain circumstances, a class of verbs may have either Accomplishment or resultative State readings. This reading is closely connected with the duality of the meanings of verbs.
(4) a. qiang shang xie-zhe ji-ge zi
    wall on write-ZHE several-CL word
    ‘Some characters are written on the wall.’

b. Xiaoli xie-le liang-ge zi
    p.n. write-Pfv two-CL word
    ‘Xiaoli wrote two characters.’

1.5 Attachment

It is observed that the above-mentioned stative and resultative uses of -zhe have a co-occurrence constraint: only verbs with a result of its theme being attached to a certain place or state are allowed with this reading of -zhe. These verbs include dui ‘to stack’, fang ‘to place’, bai ‘to place’, liu ‘to keep’, dai ‘to carry’, gua ‘to hang’, xie ‘to write’, zhan ‘to stand’, zuo ‘to sit’, dun ‘to couch’ etc.

1.6 Non-progressive

Although there seems to be dynamic uses of -zhe, as is illustrated in (1a) and (2), -zhe does not mark progressive aspect. The bona fide progressive aspectual marker in Mandarin is -zai, which has a much freer distribution than -zhe, as is shown in the contrast between (5a) and (5b):

(5) a. Xiaohua zai tiao-wu
    p.n. Prog dance
    ‘Xiaoli is dancing.’

b. ?? Xiaohua tiao-zhe-wu
    p.n. perform-ZHE-dance
1.7 Descriptive function

A salient feature of -zhe is that it has a high frequency in narrative discourses such as novels and scripts. In other words, it has a high frequency in written language. The following sentences do not normally appear in conversations; they are more likely to appear in narrative discourses:

(6) a. Xiaoli zai fang li jingjingde kan-zhe-shu, turan da-le yi sheng xianglei
   p.n. Loc room in quietly read-ZHE-book suddenly strike-Pfv one loud thunder
   ‘Xiao Li read quietly in the room. Suddenly a thunder burst out violently.’

b. Ahao pao-zhe, tiao-zhe, jiao-zhe, feichang de kaixin
   p.n. run-ZHE bounce-ZHE shout-ZHE very happy
   ‘Running, bouncing, and shouting, Ahao is very happy.’

1.8 Subordinate function

As we have noted in section 1.6, -zhe has a very restricted distribution as opposed to the progressive zai. A syntactic position where -zhe appears and zai cannot is adjunct clauses or phrases. Examined in terms of semantics, these uses of -zhe are like manner adverbs. They describe the manners of the action expressed by the main predicate.

(7) a. Xiaoli ku-zhe jiang dianhua
   p.n. cry-ZHE speak telephone
   ‘Xiaoli spoke to the telephone crying.’
b. *Ade duan-zhe cha zou-le guo-lai*

p.n. carry-ZHE tea walk-Pfv pass-here

‘Carrying some tea, Ade walked toward in this direction.’

2. **Basic approaches and goals**

These multiple properties are the ones most frequently discussed in the literature, with abundant examples and usages. They contribute a lot to our basic understanding of the usages. However, since little endeavor is made to relate the unconscionable amount of properties to each other, these accounts get too complex, especially to a non-Chinese speaker. Most importantly, these accounts give us no clue as to how a Chinese child acquires the syntactic and semantic usages of *–zhe* effortlessly. In order to understand this many-sided morpheme, I will ferret out its various forms and meanings in terms of morphology, syntax and pragmatics. With each form/meaning correspondence secured, we will be able to provide a systematic account, and furthermore achieve a deeper understanding of how tense elements play a role in the formation of a complete sentence.

To facilitate collection of the data and avoid potential biases of my grammatical judgments, I utilize a powerful tool of internet – the Google search engine.

3. **Outline**

This thesis is outlined as follows: Chapter 2 will review the key morphosyntactic properties of *–zhe* discussed in the literature and identify the unsettled semantic and syntactic issues. Chapter 3 is devoted to the aspectual status of *–zhe* within the overall Mandarin aspectual system. Based on the foundations established in chapter 2 and 3, in Chapter 4 I will go further to discuss how Mandarin sentences require elements that is able to anchor tense in terms of syntax-semantics interface. I will then briefly
discuss the remaining problems and possible future extensions of the analyses proposed in this thesis.
Chapter Two

Morphosyntactic Distribution

0. Introduction

The main purpose of this chapter is to tease apart the confusing form/meaning complex of \(-zhe\). I will start with distinctions with respect to forms. Both in terms of morphology and syntax, I will distinguish between two forms of \(-zhe\), namely it has two distinct morphosyntactic distributions. I will show that morphosyntactic distributions correspond neatly to interrelated but distinct semantic interpretations. With these ontological distinctions made clear, we can strive for a finer-grained account that avoids the redundancy and confusion in the previous analyses.

My methodology stems from my belief that a thorough and fully devoted investigation of a morpheme such as \(-zhe\) must take care of all the aspects of linguistics from two dimensions. In terms of structural distribution, we have to explore its distributions in terms of morphology, syntax, and discourse.\(^1\) With respect to semantics, we need to explore its interpretations in terms of lexical meaning, syntactic/structural meaning, and pragmatic meaning. Namely, we have to examine the morpheme's semantic interpretations in terms of morphological status and syntactic distributions and its occurrences in larger discourses. This methodology is illustrated as follows:

---

\(^1\) Two homographical morphemes, \(-zhao\) and \(-zhuo\), may be relevant in our analysis of \(-zhe\). I leave them for future research.
(1) A cross-component analysis of a grammatical morpheme from two dimensions

This thesis focuses on morphological, lexical, and syntactic analyses of form and meaning. I will leave pragmatics and discourse analysis for future research.²

Before the main thrust of morphosyntactic discussions in the following sections, a straightforward observation is that -zhe has the neutral tone and is a bound morpheme generally affixed to a monosyllabic verb. What complicates things is that it is controversial what are its lexical and grammatical meanings. Some studies focus on its grammatical meaning and simply classify it as an aspectual marker and hence an inflectional grammatical morpheme (Smith 1991, 1994, Olsen 1997, Yeh 1993, among others). However, other studies consider both lexical and grammatical meanings and identify at least two usages of -zhe, which are generally classified as stative durative and dynamic progressive (Fang 1992, Lü 1980, Kimura 1983, Liu 1985, among others). In this chapter I will assume the two-zhe analysis and examine

² Chu (1987) proposes some pragmatic analysis of -zhe, especially with regard to constructions in which -zhe and -ne co-occur. According to him, there are two kinds of constructions in which -zhe and -ne co-occurs in Beijing Mandarin, as illustrated below:

(i) Xiaoli da-zhe dianhua ne
    p.n. use-ZHE telephone Prt.
    "Xiaoli is telephoning."
(ii) na fangjian hei-zhe ne
    that room black-ZHE Prt.
    "That room is pretty dark."

In Chu’s analysis -zhe in (i) is still a durative marker, in (ii) -zhe and ne must be adjacent and bear an emphasis discourse function. Chu’s observation is important, but his pragmatic analyses of (i) and (ii) are sketchy and do not tell apart the difference between -zhe and the progressive marker zai. In addition, the high frequency of -zhe in narrative discourses such as scripts and novels also has to be accounted for pragmatically. I leave theses issues for future research.
the typical morphological and syntactic properties of the so-called durative and dynamic –zhe more carefully, and I will address the following puzzles:

(a) What morphosyntactic properties tell the two –zhe apart?
(b) Is two-zhe analysis better then one-zhe analysis? What are its advantages?
(c) How do we distinguish the different forms of –zhe in a given sentence?

1. Morphological status

In this thesis I will distinguish between two morphosyntactic forms of –zhe. Their typical usages can be illustrated in the following sentences:

(2) a. Xiaoli zai fang-li renzhende du-zhe shu
   p.n. LOC room-in diligently read-ZHE book
   ‘Xiaoli is reading diligently in the room.’

   b. gai-zhe beizi!
   cover-ZHE quilt
   ‘Cover yourself with the quilt!’

The –zhe in (2a) can suffix dynamic verbs in declarative sentences, while another –zhe in (2b) can suffix verbs which are less dynamic in imperative sentences. There are different selection restrictions of verbs in (2a) and (2b), and these selection restrictions also occur in other types of sentences. I will tentatively call them the aspectual marker –zhe and the phase marker –zhe, sometime abbreviated as –zheA and –zheP, respectively. I will redefine their morphosyntactic status below and provide arguments why we should distinguish between two forms of –zhe.
A bound morpheme affixed to a verb in Mandarin may have two possible statuses: an inflectional aspectual morpheme or a lexical morpheme in a verbal compound. It is widely observed in the literature that in some cases –zhe behaves like an aspectual marker; in others it behaves like a resultative phase marker in a verbal compound. In this section I will employ some general diagnostics that can be used to distinguish between inflectional morphemes, derivational morphemes, and compound lexemes/morphemes.

Before my analysis, I will briefly examine some useful diagnostics enumerated by Lien (1995) to distinguish between aspectual markers and phase markers in Taiwanese Southern Min:

(3) Diagnostics that distinguish between aspectual markers and phase markers
a. Only phase markers are possible in potential constructions.

b. Phase markers are in the inner morphosyntactic position (closer to the verb), aspectual markers are in the outer morphosyntactic position (farther from the verb).

c. Phase markers have numerous paradigmatic (substitutional) members, while aspectual markers has only a skimpy set of paradigmatic members.

d. Phase markers have strict collocational constraints, aspectual markers have little collocational constraints.

e. Phase markers have both lexical meanings and grammatical meanings, while aspectual markers have only grammatical morphemes.

f. Following the assumptions of lexical phonology (Kiparsky 1982), phase markers are in the lexical level, while aspectual markers are in the postlexical level. The former are irregular, not productive, and subject to lexical competition; the latter are regular, productive, and stable, not
subject to lexical competition.

g. Phase markers belong to the lexical category, while aspectual markers belong to categories of the higher syntactic level.

These diagnostics are useful in distinguishing between prototypical phase markers and aspectual markers. However, not all the diagnostics are immediately testable, but most of them are indeed relevant. My analysis of the two distinct –zhe will focus on their different collocation constraints, with the assumption that aspectual markers cannot appear in some syntactic constructions such as imperative sentences. Most of the relevant properties will also be addressed.

With the background concepts and assumptions made clear, we are properly equipped to examine morphological properties of –zhe now.

The first question linguists should ask is: “Is this morpheme derivational? Is it category changing?” The answer is negative in most cases. Generally –zhe is affixed to a verb, and the verb still retains its verbal status after the affixation.³

Second, when –zhe co-occurs with an RVC (verb-resultative/extent compound) verb, it must occur after the resultative/extent morpheme. They include zhao-liang ‘lighten-bright’, ca-gan ‘wipe-dry’, la-chang ‘pull-long’, ran-hong ‘dye-red’⁴, and many others. This morphological ordering should reflect –zhe’s lack of lexical content and imply its inflectional status, since in Mandarin no more than one resultative lexeme is allowed in a verb. It is born out when we test –zhe’s morphosyntactic status after VRC verbs by imperative sentences:

³ However, –zhe seems to change categories of its stems when it is suffixed to a limited class of adjectives in adverbal positions, as is illustrated in the following sentence:
(i) cha yao re-zhe he (Category changing: Adj. → Adv.)
    tea must hot-ZHE drink
    ‘Tea must be drank hot.’
Expressions like (i) in which –zhe occurs in adverbial positions may involve a more complex syntactic operations instead of pure morphological category changing. I will leave it for future research.
⁴ These compounds must be interpreted as atelic, an aspectual feature of –zhe to be discussed in more detail in Chapter 3.
(4) a. *la-zhe!
   pull-long-Impf

   'Pull this and hold it this way!'

b. *la-chang-zhe!

The fact that (4a) is grammatical and (4b) is ungrammatical can be accounted for straightforwardly if we postulate that aspectual markers do not occur in imperative sentences. In (4a) -zhe is not an aspectual marker; it is a phase marker closely following the verb (where it is in inner morphosyntactic position). In (4b) -zhe can only be an aspectual marker because it follows a resultative lexeme, hence its ungrammaticality in imperative sentences (where it is in outer morphological position).

Third, -zhe is free in its selection of verbs — it can co-occur with almost all kinds of atelic verbs, especially in narrative discourse. Non-iterative telic verbs are not compatible with -zhe because of its aspectual properties. However, it must be noted that this freedom of selection restriction is conditioned by semantics and syntactic structure: in some type of sentences -zhe can combine freely with almost all sorts of atelic verbs, in others it may only co-occur with a subclass of atelic verbs, such as those in imperative sentences. The selection restrictions of verbs cannot be satisfactorily explained in structural terms alone. In the light of the different degrees of selection restriction in different structures, we have a clue to distinguish between two morphological forms of -zhe: a phase marker -zhe and an aspectual marker -zhe.

Fourth, -zhe is held by most linguists to bear a [+ durative] feature, which is held by some linguists to be a lexical aspect feature (Smith 1991, 1994, Olsen 1997), and by some to be analogous to grammatical feature such as [imperfective] (Li and
Thompson 1981). In addition, when –zhe is affixed to the main verb in imperative sentence, or the main verb in actor-less locative existential sentences, it has to select verbs with [+attachment] feature specified for the spatial status of the object, as is noted by Kimura (1983) and Yuan (1993). By the attachment feature we mean during the process or the result of the action the theme is fixed to a certain location. Since [+durative] is a temporal concept, while [+attachment] is a spatial concept, and it is generally assumed that abstract temporal concepts are generally evolved from concrete spatial concepts in natural languages. In other words, the [+durative] bearing –zhe is like a grammatical aspectual marker, while the [+attachment] bearing –zhe is more like a lexical phase marker.

Fifth, no matter what the verb is, V-zhe does not have the so-called potential forms. Thus it behaves differently from other RVC verbs in this regard. There are no expressions like *gua-de-zhe ‘hang-obtain-ZHE’, *xie-bu-zhe ‘write-not-ZHE’, *zhan-de-zhe ‘stand-obtain-ZHE’ in Mandarin Chinese. This fact may suggest that –zhe no longer has a lexeme status, but as we have seen in the last paragraph –zhe still holds some lexical features. Further lexical semantics and syntactic analyses are needed to solve this puzzle.

Sixth, in some locative existential sentences, V-zhe is interchangeable with V-you. Their meanings may not be exactly the same, but clearly they both contribute to the existential meaning. Evidently existential meaning is not grammaticalized into a uniform morpheme:

(5) lanzi li zhuang-you/zhe yi-ke pingguo
    basket in contain-have/ZHE one-Cl apple

    ‘There is an apple in the basket.’
To summarize, from basic morphological properties such as productivity, positions in a RVC verb, lexical features, acceptability of potential forms, and interchangeability with other morphemes, it can be observed that -zhe sometimes behaves like inflectional morphemes and sometimes like a lexeme in a compound. In the following sections and later chapters I will give a more thorough account of these properties and examine their corresponding syntactic distributions.

2. Syntactic distribution

In this section I will examine the occurrences of V-zhe along with their dominating phrases in various syntactic positions. The discussion of syntactic distributions of -zhe is necessarily extended to higher syntactic structures because the syntax and semantics of -zhe are in many cases dependent on the higher structure, and because many of these higher phrases can be viewed as constructional idioms; that is, 'syntactic configurations whose structure contributes semantic content above and beyond that contained in the constituent lexical items' (Jackendoff 1997). Since tense/aspect/modal elements in a language are generally positioned in a higher syntactic position in generative grammar, I will focus my attention on the relation between sentence types and the occurrences of -zhe.

2.1 V-zhe in locative existential sentences
(6) a. zhuo shang bai-zhe yi-die xiaoshuo
    table on place-ZHE one-pile novel
    ‘There is a pile of novels (placed) on the table.’
b. heiban shang xie-zhe ji-hang zi
    blackboard on write-ZHE several-line character
    ‘There are several lines of characters on the blackboard.’
c. yuanzi li zuo-zhe yi-zhi gou
    yard-in sit-ZHE one-CL dog
    ‘A dog is squatted in the yard.’
d. tai shang chang-zhe yi-chu xi
    stage on sing-ZHE one-Cl play
    ‘An opera is playing on the stage.’
e. wu li fei-zhe yi-zhi bianfu
    house in fly-ZHE one-Cl bat
    ‘A bat is flying in the house.’

A typical syntactic structure in which V-zhe appears is locative existential sentences as illustrated above. They have a locative PP argument, a theme/actor argument, and a predicate compatible with existential meaning. Since these sentences are rather non-canonical in their selection of arguments, I will go into some detail in providing a more precise descriptive account and a more satisfactory generalization in this section.

To understand the nature of these sentences, we can start by comparing them with the well-known English locative inversion sentences. Semantically, the verbs

---

5 It is not entirely clear whether the location argument is an NP or a PP. Li and Thompson (1981) argues that they are PPs, while Huang (1987) argues it is more reasonable to assume they are NPs. I will not discuss this issue here, which does not bear on my analyses.
participating in English locative inversion are ‘informationally light’ and generally
denote a mode of existence (Levin & Hovav 1995). Syntactically, English locative
inversion sentences have the non-canonical PP-V-NP word order switched from the
canonical NP-V-PP word order, as is illustrated in (7). (7a) is a locative inversion
sentence, (7b) is the canonical sentence (ibid.: 218).

(7) a. In the distance appeared the towers and spires of a town which greatly
resembled Oxford. [L. Broomfield, The Farm, 124] (Locative
inversion)

b. The towers and spires of a town which greatly resembled Oxford appeared
in the distance.

In Mandarin, examples of which we will see below, locative existential sentences with
V-zhe depart from English locative inversion in that they do not always have the
NP-V-PP → PP-V-NP alternations in (7), although semantically the predicates are also
informationally light and carries existential meaning. Hence I refrain from classifying
sentences in (6) as locative inversion sentences.

In the following subsections I will distinguish five types of locative existential
(abbreviated as LE below) sentences according to the canonical argument structures
of their verbs.⁶

2.1.1 LE sentences with three-place placement predicates

---

⁶ I will only discuss LE sentences marked by –zhe and leave LE sentences marked by other
modal/aspectual markers for further research.
(8) a. zhuo shang bai-zhe yi-die xiaoshuo

   table on  place-ZHE one-pile novel

   ‘There is a pile of novels (placed) on the table.’

b. Xiaoli zai zhuo-shang bai-le yi-xie xiaoshuo

   p.n.  Loc table on  place-Pfv one-pile novel

   ‘Xiaoli placed a pile of novels on the table.’

A class of placement verbs suffixed by –zhe are felicitous with locative existential sentences. In the canonical sentences such as (8b), these verbs select an agent, a theme, and a location. When they occur in locative existential sentences (8a), they lost their dynamic meaning and the agent argument becomes absent. In addition, the occurrence of –zhe requires that the theme remain attached to the location.\(^7\) Other verbs belonging to this class include gua ‘to hang’, zhuang ‘to fill’, cheng ‘to ladle’, ting ‘to park’, chuan ‘to wear (clothes)’, dai ‘to wear (a hat, gloves)’.\(^8\)\(^9\)

2.1.2 LE sentences with two-place painting predicates

---

\(^7\) I will explore this semantic requirement fully in Chapter 3.

\(^8\) Verbs such as chuan and dai seem to be distinct from the other members of this class in that they select an sentient NP argument in the sentence initial position, as shown in (i):

(i) Xiaoli chuan-zhe yi-jian maoyi

   p.n.  wear-ZHE one-Cl  sweater

   ‘Xiaoli wore a sweater.’

It must be noted that this [+human] sentient argument is not an agent. It is the location to which the theme is attached.

\(^9\) Verbs that encode agentive manners of movement, such as diu ‘to throw’ and shuai ‘to throw down’, are generally not felicitous with LE construction. Also, liquid placement is not uniform in their acceptability of LE sentences. For example, verbs such as cheng ‘to ladle’, jao ‘to pour (syrup)’ can appear in LE sentences, but puo ‘to splash’, and guan ‘to fill’ cannot. I leave this issue for further lexical semantics analysis.
(9) a. heiban shang xie-zhe ji-hang zi \hspace{1cm} PP_{Loc} V NP_{Theme}

blackboard on write-ZHE several-line character

‘There are several lines of characters on the blackboard.’

b. Xiaoli xie-le yi hang zi \hspace{1cm} NP_{Agent} V NP_{Theme}

p.n. write-pfv one line character

‘Xiaoli wrote one line of characters.’

(9b) exhibits the canonical argument structure of painting verbs, in which they are clearly two-place predicates. In LE sentences, these verbs of painting select a theme argument that is produced by some action of an (implicit) agent. This argument is unlike the theme argument selected by placement verbs such as bai and zhuang: it comes into existence after the action of writing/painting. The verbal aspectual features, on the other hand, are like those of placement verbs in that they lack dynamicity. The suffix -zhe requires the theme to be attached to the location argument. Verbs of this class include hua ‘to draw (a picture)’, ke ‘to carve’, tu ‘to apply or to smear’, etc.

2.1.3 LE sentences with one-place posture predicates

(10) a. yuanzi li zuo-zhe yi-zhi gou \hspace{1cm} PP_{Loc} V NP_{Actor}

yard-in sit-ZHE one-CL dog

‘A dog is squatted in the yard.’

b. Xiaoli duen-zhe bu dong \hspace{1cm} NP_{Actor} PP_{Loc} V

p.n. squat-ZHE Neg move

‘Xiaoli squatted motionlessly.’

Verbs of posture in locative existential select a thematic role with properties of both an agent and a theme. By actor I mean the argument is not only sentient and has
volitional involvement with the action, but it is also the object undergoing the effects of the action. Although the argument is volitional, the verbs resemble stative verbs in that they do not involve change of state – they denote motionless situations. In addition, the argument is also theme-like because it is the object that has been ‘placed’ onto the location. The actor/theme argument is, again, attached to the location due to the semantic requirement of -zhe. Verbs such as zhan ‘to stand’, zuo ‘to sit’, tang ‘to lie (on the bed)’, and pa ‘to lie prone’ also belong to this class.

2.1.4 LE sentences with two-place activity predicates

(11) a. tai shang chang-zhe yi-chu xi

stage on sing-ZHE one-Cl play

‘An opera is playing on the stage.’

b. Xiaoli zai chang xi

Xiaoli Prog sing play

‘Xiaoli is singing (in a Chinese opera)’

There is a major difference between this type of LE sentences and those discussed above: they denote dynamic situations instead of ‘result states’. The agent thematic role is implicit in these sentences; and the theme, although not literally attached to the location, remains at the location all the time. The activity verbs in this class have to be compatible with existential meaning and have a location argument in the conceptual structure. Verbs such as chi ‘eat’, and kan ‘to watch’ are not felicitous with this construction because they do not have a location argument in the conceptual structure, and hence lack the ‘existence in a location’ meaning. Other verbs of this

10 Verbs such as kan and chi are in some limited cases felicitous with LE sentences when the location argument is the organ that performs this action:

(i) Xiaoli cuiba chi-zhe bingbang, yanjing hai kan-zhe jinse
type are *bofang* 'to play (a movie)', *ban* (*jouxi*) 'to prepare (a feast)', *yang* 'to keep, raise', cooking verbs such as *zheng* 'to steam', *yan* 'to pickle', *zhu* 'to boil', etc.

### 2.1.5 LE sentences with one-place motion predicates

(12) a. *wu li fei-zhe yi-zhi bianfu*  
    house in fly-ZHE one-Cl bat  
    'A bat is flying in the house.'

b. *you yi-zhi bianfu zai fei*  
   Exi. one-Cl bat Prog fly  
   'A bat is flying.'

Sentences of this type are also dynamic since they involve motional movement. The verbs select an actor argument. Although they do not seem to involve attachment of the theme/actor to the location, they do involve *durative existence* of the *action* and the *theme* in the location. Other verbs belonging to this type are *you* 'to swim', *pa* 'to crawl', *kai* '(a car) to run'.

### 2.1.6 How is –zhe related to locative inversion?

Since verbs suffixed by –zhe in locative existential sentences may have different argument structures from their canonical argument structure, we have to account for this polysemy. One might postulate that the suffixation of –zhe is what changes the argument structure of these verbs. However, after a more careful scrutiny we find it is neither a necessary nor sufficient condition for the alternation of argument structure. It is not a necessary condition because locative existential sentences allow other verbal

---

p.n. mouth eat-ZHE popsicle  
eye still watch-ZHE drumstick  
'With his mouthful of popstick, Xiaoli still watched the drumsticks.'
suffixes such as -you ‘existential’ and -le. It is not a sufficient condition because -zhe does not always trigger alternations of argument structure, as we will see in the sections below. One might also postulate that in Chinese verbs of certain class have more than one lexical entry specified for the argument structure and verbal aspeccual features. For example, we can list the canonical bai\textsubscript{1} as a dynamic verb that projects an agent, a theme, and a location, and bai\textsubscript{2} as a stative verb that projects a location and a theme. This proposal seems to be empirically correct, but it misses the generalization that the stative and dynamic entries are for the most part semantically related and one of them can be systematically derived from the other. We might propose, following Lien (2001) and construction grammar advocates (Fillmore et al 1988, Goldberg 1995 & Jackendoff 1997), that the verbs of certain class are underspecified for certain aspeccual features (dynamicity) and thematic-role assignments (volitionality). It is only when the verbs enter syntax, or ‘constructions’ are they fully specified with these semantic features. Another equally strong argument is light verb analysis, as is proposed by Lin (2001). Lin proposes that a locative existential sentence contains a phonetically empty light verb bearing the meaning “exist”, which is projected higher than the lexical verb. The lack of agent argument and volitionality in LE sentences is due to its selection of a light verb ‘EXIST’. The construction approach and light verb approach are empirically and theoretically superior to the traditional analysis. Right now I will not address the details of these two analyses, but through the paper and in Chapter 4 particularly I will assume the light verb analysis in my discussion of syntactic positions of -zhe.

After a somewhat lengthy discussion of -zhe in locative existential sentences, a brief summary is in order. In this section I have discussed in some detail the occurrence of -zhe in locative existential sentences. In these sentences verbs select non-canonical argument structure and different aspeccual features. Now I marshal
these observations in the following table:

(13) Semantic features of verbs suffixed by $-zhe$ in LE sentences

<table>
<thead>
<tr>
<th>Predicate type</th>
<th>Stative</th>
<th>Volitionality</th>
<th>durative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placement and painting</td>
<td>$+$</td>
<td>$-$</td>
<td>$+$</td>
</tr>
<tr>
<td>Posture</td>
<td>$+$</td>
<td>$+$</td>
<td>$+$</td>
</tr>
<tr>
<td>Activity and motion</td>
<td>$-$</td>
<td>$+$</td>
<td>$+$</td>
</tr>
</tbody>
</table>

I have previously classified LE sentences into five types according to their predicate types reflected by the argument structure. In the table they are grouped into three classes according to their repertoire of semantic features. The above verbal semantic features are either given by the verb themselves, the light verb 'EXIST' or the suffix $-zhe$. It is clear from the table that $-zhe$ does not encode stative and specifically resultive stative feature, as is proposed by Pan (1996), Smith (1991, 1994) and Yeh (1993). Now an important question to ask is what features are contributed by $-zhe$ and what are contributed by the LE construction, and what are contributed by the verbs themselves. I will provide evidence in Chapter 3 to argue that the uniform [durative] feature in these sentences is provided by the suffix $-zhe$. The non-canonical [+stative] in placement, painting, and posture verbs, and the

---

11 Professor Mei Kuang has pointed out to me that posture verbs do not seem to have volitionality. However, the subjects of these verbs obviously have some volitional control (as opposed to predicates of other types) in the situations denoted by the verb. Finer semantic analyses are necessary for these verbs, which I will leave for future research.
non-canonical [-volitional] feature in placement and painting verbs, on the other hand, are products of the complex syntactic and semantic interactions between the light verb ‘EXIST’ and the predicates themselves.

It is not conclusive whether the suffix is a phase marker or an aspectual marker at this point. In fact, aspectual markers and extent phase markers can co-occur in the same sentence. The following sentence is an example:

(14) zhuo shang bai-man-le/zhe shu
table on place-full-Pfv/Impfv book
‘There are full of books on the table.’

I will go back to this point in Chapter 3.

2.2 V-zhe as the canonical main predicate

(15) a. Xiaozhang shenshende ai-zhe ta-de taitai
     p.n. deeply love-ZHE he-Poss wife
     ‘Xiaozhang loves his wife deeply.’

b. deng liang-zhe
    lamp light up-ZHE
    ‘The light is on.’

c. Xiaoli anjingde kan-zhe shu
    p.n. quietly read-ZHE book
    ‘Xiaoli read a book quietly.’

-Zhe can also select predicates where the word order, thematic role assignment and dynamicity/staticity features are canonical. In these sentences the verbs can be
either stative (15a,b) or dynamic (15c). A large number of activity verbs and certain stative verbs are felicitous with this construction. The syntactic status of –zhe in these sentences is like that of an aspectual marker since it occurs in the canonical main predicate position and does not have lexical meanings such as [attachment].

2.3 V-zhe in imperative and subjunctive sentences

(16) a. ding-zhe ta!

   watch-ZHE him

   ‘Watch him!’

b. zhua-zhe!

   grasp-ZHE

   ‘Grasp and hold it!’

c. *chi-zhe!

   eat-ZHE

d. Xiaoli xiang tang-zhe

   p.n. want lie-ZHE

   ‘Xiaoli wants to remain lying down.’

e. *Xiaoli xiang chi-zhe

   p.n. want eat-ZHE

f. wo hao xiang gen ni yichi kan-zhe xiziwan-de xiyang

   I very want with you together watch-ZHE Xiziwan-Poss sunset

   ‘I desire to watch sunset with you at Xiziwan.’

12 Sentence (15d) actually has at least two meanings. One is ‘Xiaoli wants to enter the state of lying down’, the other is ‘Xiaoli wants to remain in the state of lying down.’ I will not discuss this ambiguity in this thesis, which is perhaps relevant to pragmatics.
Imperative and subjunctive clauses belong to the Irrealis modal category and do not allow tense morphemes. The compatibility of \textit{zhe} with these sentences suggests that \textit{zhe} is not a tense morpheme. It seems that in these sentences only a limited set of verbs are possible, but in certain complex constructions and discourses the selection restrictions are freer. These peculiar selection restrictions will be explained in Chapter 3 and 4. In these constructions \textit{zhe} has parallel distributions to typical phase markers such as \textit{lao} ‘firm’ and \textit{zhu} ‘hold’:

\begin{itemize}
  \item (17) a. \textit{ding-zhu ta!} (cf. 16a)
    \begin{itemize}
      \item watch-hold him
      \item ‘Watch him!’
    \end{itemize}
  \item b. \textit{zhua-lao!} (cf. 16b)
    \begin{itemize}
      \item grasp-firm
      \item ‘Grasp firmly!’
    \end{itemize}
  \item c. \textit{Xiaoli xiang zha-zhu zhege jihei}
    \begin{itemize}
      \item p.n. want seize-hold this opportunity
      \item ‘Xiaoli wants to seize this opportunity.’
    \end{itemize}
\end{itemize}

Thus in these constructions we can assume \textit{zhe} has the function of a phase marker and imposes severe selection constraints (with possible exceptions in situations like (16f)). It must also be noted that \textit{zhe} and other phase markers such as \textit{zhu} and \textit{lau} are still quite distinct in their selection restrictions. It is clearly due to semantic factors, which I will discuss in Chapter 3.

\textbf{2.4 V-zhe that selects a non-finite clausal argument}
(18) a. Xiaomei (zai) mang-zhe xie(*-le/*/zhe/*/guo) zuoye
    p.n.    busy-ZHE write homework
    ‘Xiaomei is busy doing her homework.’

b. Xiaoazhang han Xiaoli (zai) qiang-zhe fu(*-le/*/zhe/*/guo) qian
    p.n. and p.n. strive-ZHE pay money
    ‘Xiaozhang and Xiaoli are striving to paying the bill (before the other).’

c. dajia dou zai deng-zhe xia(*-le/*/zhe/*/guo)ke
    everybody all Prog wait-ZHE dismiss class
    ‘Everybody is waiting the class to be dismissed.’

When suffixed by –zhe, a limited set of verbs such as mang, deng, and qiang can select a non-finite clausal argument which does not have an overt subject. Their non-finite status is witnessed by their incompatibility with aspectual elements -le/-zhe/-guo and the assumptions of GB framework that a non-overt subject undergoing Equi-NP deletion (in formal terminology, a PRO) is only possible in non-finite clauses. The sufflication of –zhe is obligatory when the verb selects non-finite clausal arguments. –Zhe seems to have multiple functions in these sentences: one is to c-select a non-finite clause, whereas the other is to mark imperfective aspect.

2.5 V-zhe in adverbial clauses

(19) a. Xiaoli ku-zhe jiang dianhua
    p.n. cry-ZHE speak telephone
    ‘Xiaoli spoke to the telephone crying.’

b. Ade duan-zhe cha zou-le guo-lai
c. Xiaoli  du-zhe du-zhe  jou shueizhau le
   p.n. read-ZHE read-ZHE then fall asleep Pft
   ‘Xiaoli read and read, and then fell asleep.’

d. Xiaoli ku-zhe  jiang-le  yige  xiaoshi de dianhua
   p.n.  cry-ZHE speak-Pfv one-Cl hour Poss telephone
   ‘Xiaoli spoke to the telephone crying for an hour.’

e. *Xiaoli tiao-zhe wu le
   p.n.  perform-ZHE dance Pft

In (19a--d) V-zhe is in the subordinate clause position. In (19c) –zhe is in reduplicated form. There are several pieces of evidence supporting this subordination analysis. First, the second verb can take a tense/aspectual element, as is shown in (19b,d). This property is characteristic of a main predicate. Second, main predicate -zhe is typically incompatible with sentential final particle le denoting ‘current relevant state’ (Li & Thompson 1981: 238), because of their conflicting aspectual features, as we can see in (19e). However, (19c) is a perfectly grammatical sentence. This suggests V-zhe is not the main predicate. Third, the constituent following the first verb or verb phrase is obviously not its argument. Ku ‘to cry’ does not select jiang dianhua ‘speak to the telephone’, for example. Third, unlike the first verbs we discussed in section 2.3, the first verb cannot co-occur with the progressive marker zai.

In subordinate clauses –zhe behaves in some respects like an asaspectual marker, and in some respects it does not. It is like an asaspectual marker because there is little selection restriction between -zhe and the verb it suffixed; it is also not like typical
aspectual markers in that no other aspectual markers are possible in subordinate clauses. It seems that –zhe has an additional syntactic and semantic function of adjunct clause maker in these sentences.

2.6 V-zhe in serial verb and juxtaposition-of-events constructions

(20) a. Xiaoli yibian chezhe hanbao, yibian kanzhe dianshi
    p.n. one-side eat-ZHE hamburger one-side watch-ZHE TV
    ‘Xiaoli ate hamburger, and at the same time he watched TV.’

b. Ahao pao-zhe, tiao-zhe, jiao-zhe, feichangde kaixin
    p.n. run-ZHE bounce-ZHE shout-ZHE very happy
    ‘Running, bouncing, and shouting, Ahao is very happy.’

V-zhe can also occur in constructions where a series of verbs or verb phrases co-occur in the same matrix sentence. Here, –zhe also behaves like an aspectual marker in its free selection of action verbs. It also has some additional functions since other aspectual markers do not occur in these constructions.  

The multifarious syntactic distributions of –zhe examined in this section present counterexamples to the previous analysis of –zhe as an exclusively imperfective (Smith 1991, 1994, Yeh 1993), resultative (Yeh 1993), stative (Smith 1991, Yeh 1993), or subordination marker (Chu 1987). From the locative existential constructions alone we find only a subset of verbs suffixed by –zhe have resultative or stative meaning. In some constructions the imperfective meaning is by no means clear, either. In

\[\text{\footnotesize 13 The non-occurrence of other aspectual markers is possibly due to two factors. First, their aspectual properties (such as perfective) do not allow them to modify another event. Second, they are syntactically disallowed in positions where –zhe occurs. I will leave this issue for future research.}\]
imperative and subjunctive clauses there doesn’t seem to be any reference time point for us to identify an imperfective meaning.

In the observations we also discover that –zhe can occur a wide range of sentence types. In certain constructions it has properties of an imperfective aspectual marker, in the others it has properties of a phase marker.

3. **How many forms of –zhe are there?**

In this section I will review my findings in a table, and try to answer the questions I asked at the end of the introduction.

3.1 **Arguments from morphosyntactic diagnostics supporting two –zhe**\(^{14}\)

From the above morphosyntactic distributions we discover –zhe is a morpheme with at least two morphosyntactic statuses. One is like an aspectual marker and the other is a phase marker.

I have discussed some of the properties listed by Lien and given some more syntactic diagnostics in the above two sections. Now I summarize them in the following table:

\[(21) \text{Typical diagnostics distinguishing between aspectual markers and phase markers}\]

\(^{14}\) I will arbitrarily treat the plurality of –zhe as a zero form in this thesis.
<table>
<thead>
<tr>
<th>Morpheme type</th>
<th>Aspectual marker</th>
<th>Phase marker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential constructions</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Occurs after an RVC verb</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Paradigmatically simple</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Strict selection constraints</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>With lexical meanings</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Lexical competition</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>LE sentences</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Imperative sentences</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Subordinate clause</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

When we employ these diagnostics to test on prototypical aspectual markers such as *zai/guo*\(^{15}\) and phase markers such as *-lao, -zhu, and -wan*, the distinction is clear-cut. When we employ them to test *-zhe*, however, we get confusing results. In some morphosyntactic positions, *-zhe* patterns with a phase markers (abbreviated as *-zhe\(_A\)*); in other circumstances, *-zhe* patterns with aspectual markers (abbreviated as *-zhe\(_F\)*).

---

\(^{15}\) As I will discuss later, the perfective aspectual marker *-le* also has phase marker counterparts, so it does not belong to the clear-cut cases.
(22) Result of putting –zhe into diagnostics distinguishing between aspectual and phase markers

<table>
<thead>
<tr>
<th>Types of -zhe</th>
<th>Aspectual</th>
<th>Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnostics</td>
<td>-zhe</td>
<td>-zhe</td>
</tr>
<tr>
<td>Potential constructions</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Occurs after an VRC verb</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Strict selection constraints</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>With lexical meanings</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>LE sentences</td>
<td>Yes</td>
<td>?</td>
</tr>
<tr>
<td>Imperative/subjunctive sentences</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Subordinate clause</td>
<td>Yes</td>
<td>?</td>
</tr>
</tbody>
</table>

The boundary between -zheA and -zheP is not as clear as that of the prototypical aspectual and phase markers, witness the diagnostics in the shaded areas. Both -zheP and -zheA do not have potential forms, and it is not conclusive whether -zheP can occur in LE sentences and subordinate clauses. These embarrassing properties of –zhe has by far eluded most of Chinese linguists’ attention. I will focus on clear-cut cases in this paper, which are still not properly dealt by linguists, and make explicit what syntactic and semantic accounts underlie the two distinct behaviors of –zhe.

3.2 Two-zhe analysis vs. one-zhe analysis

It now seems clear we have an answer to the heading of the section: there are indeed two distinct morphosyntactic forms of –zhe, as is shown by their possibility to
satisfy diagnostics for both phase markers and aspectual markers. Let's see how this
analysis works. In imperative and subjunctive sentences, the incompatibility of –zhe
with certain class of verbs is attributed to two factors. First, there are independent
constraints that prohibit the occurrence of aspectual markers in these sentences. Since
aspectual markers are disallowed in these constructions, only –zheP is possible.
Second, –zheP as a phase marker behaves like the other phase markers in its
idiosyncratic selection restrictions. Therefore, only an idiosyncratic class of verbs can
co-occur with –zheP in these constructions.

If we argue that there is only one form of –zhe that has two distinct properties,
we will get complex results. In this analysis, the impossibility of –zhe to appear with
certain verbs in certain constructions can only be attributed to the semantic properties
of verbs, or the combinatory semantic properties of V-zhe, not because the inherent
properties of a subclass of –zhe. This analysis will only meet more difficulties. Since
the verbs such as pao! ‘Run!’ and chi! ‘Eat!’ are quite comfortable in imperative
sentences alone, it is evidently not the verbal properties that prohibit them to co-occur
with –zhe in imperative sentences (*pao-zhe!, *chi-zhe!). We would also have
difficulties explaining the specific co-occurrence constraints of these verbs with –zhe
in imperative and subjunctive sentences. We can at most offer ad hoc semantic
analysis, not independent constraints if we adopt the one-zhe analysis.

3.3 How do we distinguish between –zheP and –zheA?

At present the most clear-cut cases is that in imperative and certain type of
subjunctive sentences only phase marker –zhe is possible. In declarative sentences
both –zheP and –zheA are possible, as are typical aspectual markers and phase markers.
In addition, the same type of verbs can co-occur with both aspectual markers and
phase markers. The only way left to distinguish between two forms of –zhe in
declarative sentences is semantic differences. I have suggested that –zheP has certain
lexical level aspectual properties, and –zheA has certain grammatical level aspectual
properties. I will discuss these properties in detain in Chapter 3.

3.4 Arguments from two distinct uses of verbal suffix -le

It has been observed in the literature that there are two uses of verbal suffix –le, 
one is aspectual marker –le and the other is phase marker –le (Lü 1980, Kimura 1983,
Wang 1993, Sybesma 1999, among others). These two uses of –le manifests almost
exactly the same divergent morphosyntactic behaviors to the two morphosyntactic
forms of –zhe. To begin with, -lep (abbreviation of phase marker -le), which Lü
(1980:316) argues to be semantically equivalent to -diao ‘lose, away, disappear’, can
appear in imperative and subjunctive sentences.

(23) a. wang-le  zhe-jien shi!  
forget-lose this-CI matter
Forget this matter!

b. *du-le  na-ben shu!  
read-lose that-CI book

When an VRC verb is followed by –le, this –le can only be –leA:

(24) *wang-diao-le  zhe-jien shi!  
forget-lose-Pfv this-CI matter

It is not immediately clear whether -lep has potential forms. A phonologically
related form –liao is able to occur in potential constructions. However, -liao in

34
potential construction is not simply a phase marker meaning ‘lose, away’, because a wide range of verbs is allowed in these constructions. Therefore the meaning of –liao is different from the meaning of –le. Examples are wang-bu-liao ‘cannot forget’, chi-de-liao ‘can eat’ du-de-liao ‘can read’.

–Le\(\text{p}\) has similar selection restrictions as with –dia\(\text{o}\), while –le\(\text{A}\) has little selection restrictions.

I will not go further to discuss the two distinct morphosyntactic properties of –le at this point.

(25) Result of putting –le into diagnostics distinguishing between aspectual and phase markers

<table>
<thead>
<tr>
<th>Types of –le</th>
<th>Aspectual</th>
<th>Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnostics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential constructions</td>
<td>No</td>
<td>(Yes)</td>
</tr>
<tr>
<td>Occurs after an VRC verb</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Strict selection constraints</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>With lexical meanings</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>LE sentences</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Imperative sentences</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Subordinate clause</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

3.5 Arguments from Cantonese and diachronic perspective\(^{16}\)

The Cantonese dialect provides a very strong argument for the two –zhe analysis in Mandarin. In Cantonese, the morphemes corresponding to –zhe\(\text{A}\) and –zhe\(\text{p}\) have

\(^{16}\) The Cantonese data and are provided by Honcin Chow. I am gratitude for his enthusiastic and persistent offer of the data.
distinct phonetic forms: \(-zhe_\text{A}\) corresponds to \(-gan\); \(-zhe_\text{P}\) corresponds to \(-zyu\).

(26) a. \textit{ngaaup-zyu!}
   
   bite-Dur
   
   ‘Hold it with your teeth!’

b. \textit{zoek-zyu!}
   
   wear-Dur
   
   ‘Keep wearing this! / Put this on!’

c. \textit{coeng soeng gwaa-zyu jat-fuk waa}
   
   wall on hang-Dur one-Cl painting
   
   ‘There is a painting hanging on the wall.’

d. \textit{toi soeng coeng-gan hei}
   
   stage on sing-Prog play
   
   ‘An opera is being sang on the stage.’

e. \textit{Lingit mong-zyu ngo siu}
   
   p.n. stare-Dur I smile
   
   ‘Lingit smiled while looking at me.’

f. \textit{Lingit sik-gan maanfaan}
   
   p.n. eat-Prog dinner
   
   ‘Lingit is eating dinner.’

g. \textit{Lingit zingzingdei sik-gan faan m gongie}
   
   p.n. quietly eat-Prog meal Neg talk
   
   ‘Lingit ate quietly without talking.’

In (26a, b, e, f) we find exact parallel behaviors of Mandarin counterparts of \(-zhe_\text{A}\) and \(-zhe_\text{P}\). In imperative sentences only \(-zyu\) is allowed, and the verbs they co-occur are limited to ‘stative’ verbs. In declarative sentences \(-gan\) is used instead to
mark progressive aspect. In (26c, e), however, we find -zyu has additional functions. They can occur in locative existential sentences and subordinate clauses. I will leave these functions of -zhu for future research.

(27) Result of putting Cantonese -zyu and -gan into diagnostics distinguishing between aspectual and phase markers

<table>
<thead>
<tr>
<th>Types of -zhe</th>
<th>Aspectual</th>
<th>Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diagnostics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential constructions</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Occurs after an VRC verb</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Strict selection constraints</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>With lexical meanings</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>LE sentences</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Imperative sentences</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Subordinate clause</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

4. Conclusion

In this Chapter I examined the form/meaning complex of two distinct uses of -zhe. The material and analysis in this chapter is mainly descriptive and tell us little about the interaction between syntax and semantics, and I have done little to tease apart my findings in the way it is meant to be in figure (1). Nevertheless, I have organized some important morphosyntactic and corresponding semantic features in a systematic way and proposes that the status of -zhe is between an aspectual marker and a phase marker. In Chapter 3 and Chapter 4 I will devote myself fully to the theoretical explanations of the syntax and semantics of these two distinct uses of -zhe.
Chapter Three

Semantic Interpretation

0. Introduction

In Chapter 2, I have managed to show that there are at least two morphosyntactic incarnations of $-\text{zhe}$, $-\text{zhe}_A$ and $-\text{zhe}_P$. In this chapter I will find semantic evidence for this distinction. Semantic interpretation of aspektual categories is an intricate matter. Fortunately, linguists have some agreement on the semantic makeup of aspektual categories. I will review some of the well-known literature categorizing aspects in terms of lexical aspects and grammatical aspects and establish my basic assumptions and analyses following these results. I will not go into technical Fregean compositional properties of aspects; instead I will employ some useful graphic conceptual schemas. Well equipped, I will go on to first discuss the lexical aspektual features of $-\text{zhe}_P$ and examine semantic environments. Then I will discuss the grammatical aspektual feature of $-\text{zhe}_A$ as contrasted to the progressive marker $\text{zai}$. I argue that the dynamic feature of $\text{zai}$ and the complementary distribution between $\text{zai}$ and $-\text{zhe}$ does not entail the latter’s stative feature. I argue that there are syntactic distribution reasons for their complementary distribution, a proposal which I will explore in detail in Chapter 4. Finally, I will discuss some non-aspektual semantic properties of $-\text{zhe}$.

1. Basic notion of aspects and level of aspects

1.1 The notion of aspect

Comrie’s (1976) seminal work *Aspect* makes explicit the importance of telling apart aspect from tense, both of which express basic concepts of time in human
languages. According to him, ‘tense relates the time of the situation referred to to some other time, usually to the moment of speaking’ (Ibid.: 2), while ‘aspects are different ways of viewing the internal temporal constituency of a situation’ (Ibid.: 3). Following this fundamental categorization, linguists go further to discuss the categorizations of aspects.

Chung and Timberlake (1985: 214) distinguish between four levels of semantic structure in which aspeclual notions can be encoded, as is illustrated in the following:

(1) *Semantic structures where aspectual notions can be encoded* (Ibid.)

verb: angry

predicate: John got angry at a stranger

proposition: John got angry at a stranger on the bus today

narrative: John got angry at a stranger on the bus today, and then apologized

They noted ‘the most important distinctions is that between propositional level and the verb and predicate levels; the latter two may be referred to together as the lexical level.’ In addition, ‘it is the proposition level that is particularly relevant to aspect that is encoded by bound morpheme on the verb form.’ (Ibid.) In their views, perfective and imperfective aspects belong to the proposition level involving the notion of closure.

In Smith’s (1991) work she proposes a two-component analysis, in which the lexical categories provide situation types in the conceptual structure, while grammatical categories provide viewpoints imposed on the situation types. Her analysis focuses on making explicit the semantic hierarchical relationships between lexical aspect and grammatical aspects. Her concepts are best illustrated in the following schema (Ibid.: 7):
(2) Smith’s composite temporal schema for Mary was walking to school

a. [Mary walk to school] I . . . . F (Accomplishment schema)
b. [be + ing] /// (Imperfective schema)
c. Mary was walking to school I . /// . F (Composite schema)

The brackets elements are semantic representations. The viewpoint aspect periphrasis [be + ing] is what makes the situation [Mary walk to the school] ‘visible’; this type of aspect generally corresponds to grammatical morphemes.

Olsen (1997) based her analysis on Smith’s insight that grammatical aspects are imposed on lexical aspects. She proposes the feature matrix in (3) for lexical aspects, and the schema in (4) for grammatical aspects.

<table>
<thead>
<tr>
<th>CLASS</th>
<th>NUCLEUS</th>
<th>CODA</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>[+ durative]</td>
<td></td>
</tr>
<tr>
<td>Activity</td>
<td>[+ dynamic]</td>
<td>[+ durative]</td>
</tr>
<tr>
<td>Accomplishment</td>
<td>[+ dynamic]</td>
<td>[+ durative]</td>
</tr>
<tr>
<td>Achievement</td>
<td>[+ dynamic]</td>
<td></td>
</tr>
<tr>
<td>Semelfactive</td>
<td>[+ dynamic]</td>
<td></td>
</tr>
<tr>
<td>Stage-level state</td>
<td></td>
<td>[+ telic]</td>
</tr>
</tbody>
</table>
(4) Olsen's model of grammatical aspects

a. Imperfective:

[nucleus < coda] ET

|     

Time----RT----------> 

b. Perfective:

[nucleus < coda] ET

|     

Time----------RT--> 

ET and RT are abbreviations for event time and reference time, respectively. The gist of these schemas is that lexical aspects concern the internal makeup of the event time, while grammatical aspects concern the focus of reference time on a subpart of event time. Olsen also proposes some highly constrained semantic compositional rules based on her monotonic principles and privative feature analysis. Her proposals are very attractive and give a much simpler compositional account of lexical and grammatical aspectual properties of a given sentence. I will discuss these notions with respect to the properties of \(-zhe_A\).

In summary, aspects have the general property of denoting the internal make-up of situations.\(^1\) Lexical aspects are lexical properties that are encoded directly in the verbs or realized somewhere at the VP level, grammatical aspects are realized at the propositional level and are generally realized in the inflectional morphology.

\(^1\) The term situation encompasses both events and states. Events are [+dynamic] situations, while states are [-dynamic] situations.
1.2 Lexical aspects

Vendler (1967) classified VPs into four classes: State, Activity, Accomplishment, and Achievement. These four verb (or VP) types are slightly expanded by linguists studying aspects such as Smith (1991) and Olsen (1997). In addition, they have proposed some compositional principles with which lexical aspectual features of a VP can be computed from its constituents. The typical aspectual features include \([\pm\text{durative}], [\pm\text{telic}],\) and \([\pm\text{dynamic}].\) These semantic features are realized at the lexical projections of the syntax, including the intrinsic properties of the verb, the singularity/plurality and definiteness of the predicate’s arguments, the time adverbs, and some of the orientation affixes and phase markers, which are abundant in Mandarin.\(^2\) Semantically, lexical aspects provide “the internal temporal constituency of the ET, the time during which a situation holds or develops (Olsen 1997: 60)”.

1.3 Grammatical aspects

Grammatical aspects, which are typically perfectives and imperfectives, can be defined in terms of both morphosyntax and its aspectual meaning. Morphosyntactically speaking, they are realized by inflectional morphemes at the functional projections of the syntax, they are subject to inflectional morphosyntactic constraints such as paradigmatic simplicity and absence of selection restrictions with predicates. They belong to the functional projections in the syntactic structure. Semantically speaking, they lack lexical content and define temporal relations at the propositional level. Crucially, they specify the ET-RT intersection (Olsen 1997, borrowing Reichenbach’s (1947) terminology of tense). In other words, when they are superimposed on lexical aspects, they are “different ways of viewing the internal

\(^2\) Some of the time adverbs are treated as functional categories in generative grammar. They are closely connected to grammatical aspect agreements, such as \(yijing\) ‘already’, which agrees with perfective marker \(-le.\) The current classification is not sufficient to account for these time adverbs.
constituency of situations (Comrie 1976: 3).”

2. Chinese aspectual systems

Chinese is classified by most linguists to be a morphologically tenseless language but complete with grammaticalized aspectual distinctions. Morphemes such as -le/-zhel-guo/zai are semantically aspectual categories that can be used to express tense via conversational implicature (a term coined by Grice 1975) or with the combined temporal anchoring provided by time adverbs.³ Typical usages of these morphemes are illustrated in the following:

(5) Mandarin grammatical aspectual morphemes

a. perfective -le:

_Xiaoli pao-le liang quan_

p.n. run-Pfv two lap

‘Xiaoli ran two laps.’

b. progressive zai:

_Xiaoli zai xie gongke_

p.n. Prog write homework

‘Xiaoli is doing homework.’

c. experiencial/perfective guo:

_Xiaoli he guo jou_

p.n. drink Exp./pfv liquor

‘Xiaoli has the experience of drinking liquor.’ or

‘Xiaoli have drunk some liquor.’

³ For some cogent arguments, the reader can refer to Li and Thompson’s (1981) work, which supports the non-tense status of -le.
d. imperfective –zhe:

*Xiaoli yizhi kan-zhe heiban*

p.n. always watch-Impfv⁴ blackboard

In addition to these aspectual markers, Mandarin also has other suffix-like elements: phase markers, such as the second morpheme in *da-puo* ‘hit-break’, *chi-wan* ‘eat-finish’. Their functions seem to resemble those of aspectual markers, but because they encode specific lexical meanings and can be suffixed by aspectual markers, they are by themselves not aspectual markers.

3. The selection restrictions and aspectual status of –zhe

I have teased apart two distinct morphosyntactic forms of –zhe in Chapter 2. The different distributions of different kinds of “verb + zhe” combinations cannot be explained by semantics alone. By proposing two morphosyntactic forms of –zhe we have a systematic way of explaining the severe selection restrictions in imperative sentences and subjunctive sentences. In this section I will discuss the semantic properties of –zheₐ and –zheₚ, and address the following questions:

(a) Do different forms of –zhe have different selection restrictions?
(b) What are the common and distinct semantic features of them?
(c) How do we distinguish between different –zhe in a given sentence?

3.1 -zheₚ (-zhe as a phase marker)

Since only -zheₚ is possible in imperative sentences, we may use them as our

⁴ From now on, I will translate -zheₐ as an imperfective marker, and -zheₚ as a lexeme meaning roughly ‘attach.’
starting point. Yuan (1993) lists six kinds of verbs that –zhe can co-occur with in imperative sentences, as are listed below:

(6) Six types of verbs that are compatible with –zhe in imperative sentences

a. Verbs of posture:  
   zuo ‘to sit’, zhan ‘to stand’, tang ‘to lie (on the bed)’

b. Verbs of resting/waiting:  
   xie ‘to rest’, deng ‘to wait’, dai ‘to stay’

c. Verbs of wearing:  
   chuan ‘to wear’, gai ‘to cover’, wei ‘to scarf’

d. Verbs of carrying:  
   na ‘to hold’, bao ‘to hold (in arms)’, kong ‘to shoulder’

e. Verbs of placement:  
   bai ‘to place’, cang ‘to hide’, ge ‘to put aside’

f. Verbs of cognition:  
   ting ‘to listen’, kan ‘to watch’, ji ‘to remember’

When these verbs are suffixed by –zhe as an order, the speaker wants the hearer either to perform an enduring action (such as na-zhe! ‘Hold this!’) or an action with enduring effects (fang-zhe! ‘Put it down (and don’t pick it up again)’), or stay in the action the hearer has been performing before the issuing of the order (na-zhe ‘Keep holding it!’). In all of these senses, the invariant meaning requirement is durativity of the action or of the effects closely connected with the action.

In addition to the durativity requirement, the verbs must also be compatible with agentivity (cf. *piao-zhe! ‘float-Dur’, *sheng-zhe bing! ‘get-Dur-sick’) and motionless events (cf. *pao-zhe! ‘run-Dur’, *chi-zhe! ‘eat-Dur’). The former requirement is due to the imperative meaning, while the latter is required by the idiosyncratic lexical selection restrictions of –zhe as a phase marker.

These verbs allowed in imperative sentences belong to the class of verbs that are compatible with the phase marker –zhe. Typical aspectual markers do not occur in
imperative sentences, as shown below: 

(7) a. pao!
    run
    ‘Run!’

b. pao wu fenzhung!
    run five minute
    ‘Run for five minutes!’

(8) a. *pao-le wu fenzhung!
    run-pfv five minute

b. *zai pao!
    Prog-run

(9) a. * pao-zhe
    run-Impfv

b. na-zhe!
    hold-Dur
    ‘Hold this!’

Sentences (8) and (9a) contain aspectual markers, hence their ungrammaticality. The grammaticality of sentence (9b) follows from \(-zhe\)'s status as a phase marker. In addition to imperative sentences, some subjunctive sentences also allow only phase markers and militate against aspectual markers. In (10) the progressive zai and \(-zhe\A cannot occur after the modal hui:

---

5 This constraint may not be due to the prohibition of reference time in imperative sentences, since temporal adverbials are allowed in these sentences. It may be due to the syntactic architecture constraints involving TP and AspP in imperative sentences.
(10) a. wo hui kan-wan zheben  shu

    I will read-over this-Cl book

    ‘I will read this book through.’

b. *wo hui zai chifan

    I will Prog eat

c. wo hui yongyuán ai-zhe  ni

    I will forever love-Dur you

    ‘I will love you forever.’

d. *wo hui yizhi  zou-zhe

    I will without stop walk-Dur

As I have illustrated in Chapter 2, phase markers belong to the lexical category in terms of their morphosyntactic behavior. They are numerous in number, contain concrete lexical meanings, and are able to appear in constructions where aspectual markers cannot. I have argued that -zheₚ belongs to such category. In this section I will examine its major lexical aspectual properties with regard to [±dynamic], [±durative], [±telic], and the [±active] feature (proposed by Chen (1977, 2002)). I will argue that -zheₚ does not have the aspectual [+imperfective] feature since it does not link an event to a reference time. In terms of lexical features, it has the [+durative], and [-active] feature encoded in its semantics. I will also discuss why individual-level stative predicates cannot co-occur with -zhe.

3.1.1 Reference time is not encoded semantically

The notion of reference time (RT) is closely related to Comrie's (1976) definition of aspects as “different ways of viewing the internal constituency of situations.” I argue that -zheₚ does not encode reference time in this sense. In imperative sentences,
where \(-zhe_P\) is able to occur, the speaker intends for an event to be accomplished in some way, which may involve the internal temporal constituency of events, but it is as far as imperative sentences go. For example, phase markers with [+telic] features such as \(-diao\) `away', \(-hao\) `finish' are quite felicitous in imperative sentences. However, imperative sentences need not and do not involve different viewpoints of the temporal constituency of events, hence the ungrammaticality of (8) and (9a). Aspectual markers necessarily encode reference time semantically and are therefore incongruous with imperative sentences.

3.1.2 Dynamicity

The [+dynamic] feature is a complex concept. The basic criteria are agentivity, change of state, and motion. Linguists have different ideas as to the exact criteria for this feature. Although agentivity, motion, and change of state are sufficient conditions for dynamicity, they are not necessary conditions. Syntactically, compatibility with the progressive aspect is also a useful criterion, but it has some problems, as is noted by Chen (2002).\(^6\) Despite of these complexities, I will show that verbs co-occurring with \(-zhe_P\) are compatible with the [+dynamic] feature.

First, as I have mentioned above, agentivity is a sufficient condition for [+dynamic] situations (Chung and Timberlake 1985). If a sentence has an agent argument, it is [+dynamic]. As we have observed in Chapter 2, \(-zhe_P\) is able to appear in imperative sentences, which necessarily have an implicit or explicit second person agent argument. This suggests that \(-zhe_P\) is compatible with [+dynamic] meaning. Is \(-zhe_P\) compatible with [-dynamic] meaning? The answer is not immediately clear, since the only cases which we are certain that only \(-zhe_P\) is possible by far is in

\(^6\) Chen proposes that English progressive is not a valid diagnostic for determining dynamicity. However, she does not delve into the suitability of progressive \(zai\) as a diagnostic in her article.
imperative sentences. In this thesis I will focus on the more relevant feature [±active], which I will define in detail below.

Even if -zhe₂ is able to co-occur with [-dynamic] situations, it is well known that individual-level stative predicates such as dong, ‘to know’, mingbai ‘to have understanding’, and xiang ‘to resemble’ do not accept the suffixation of -zhe. How can we derive this selection restriction from the semantic features? A solution, which I will adopt, comes from Mei (2001), who suggests that individual-level stative sentences are not marked for any aspectual features, and that stage-level predicates, such as ai ‘to love’, bing ‘to be sick’ and gua ‘to hang’ (in LE sentences), are specified with [+durative] feature. Since -zhe₂ is a phase marker that contains aspectual features, it is not compatible with individual-level stative sentences, which inherently do not and cannot be marked by aspectual features.

3.1.3 [-Active] or [+ → -Active]

Chen (1978) has discussed the syntactic behaviors of the locatives with respect to verbs of four major types. According to her, verbs such as zuo ‘to sit’ (Type III), gua ‘to hang’ (Type IVa), and xie ‘to write’ (Type IVb) in the NP-V-zai-NPLOC construction all belong to [-active] verbs. There are no motions and movements involved in these verbs in the NP-V-zai-NPLOC construction. These verbs may have resulted from [+active] inceptive motions such as zuo xia ‘to sit down’, gua shang ‘to hang sth. up’. This feature neatly accounts for the idiosyncratic selection restrictions of the phase marker -zhe in (6): they are all motionless, hence [-active]. It explains why the typical [+dynamic] verbs involving motions are not felicitous with -zhe₂.

This analysis seems to be simple at the first glance, but it still has much to account for. First, if some verbs can be marked [+active] in their inceptive stage and [-active] in their resultative state stage, how is this duality encoded in the grammar? If
some verbs can have different aspectual features in different realization stages while the others cannot, how is this distinction encoded in the grammar? Before I give this feature a more substantial definition, I will discuss some possible alternative analyses and their problems.

An alternative approach is that two lexical entries are listed for verbs of placement, posture, wearing and carrying as is illustrated in (6). One is marked for [+active] while the other is marked for [-active]. This distinct-entry approach is surely not satisfying for it fails to capture the fact that these entries are phonetically identical and clearly denote different parts of the same action. It will be rather costly to store recurring patterns as different lexical items in the lexicon. Therefore, this approach is ruled out. Second, we may also entertain the possibility that the different readings are simply corollaries of distinct syntactic constructions, so we do not need to postulate the [-active] feature. In Lin's (2001) light verb syntax, the motional, change-of-state reading of placement verbs such as fang is produced by non-overt light verbs such as DO or CAUSE. A sentence with the light verb DO has the following syntactic structure:

(11) \[ ...vP \]
    \[ \quad v' \]
    \[ \quad v \]
    \[ \quad DO \]
    \[ \quad Obj \]
    \[ VP \]
    \[ \quad v' \]
    \[ \quad V \]
    \[ \quad fang \]

The motionless state reading is produced by light verbs such as EXIST or simply lack of light verbs. For example, the sentence *na ben shu fang zai zhuan shang* 'That
book is on the table’ has the following syntactic structure:

(12)  

\[
\begin{array}{c}
\text{...VP} \\
\text{NP} \quad \text{V'} \\
\text{na ben shu} \quad \text{V} \\
\text{‘that book’} \quad \text{fang} \\
\text{‘put’} \\
\text{zai zhuo shang} \\
\text{‘on the table’}
\end{array}
\]

This syntactic approach solves many problems previously unaccounted for and is able to take care of a wide range of Mandarin syntactic constructions in a unified way. However, when we encounter selection restrictions of verbs in certain constructions, such as imperative sentences and locative existential sentences, it is clear that syntactic structures alone are not enough to account for the dual semantic features of certain verbs and absence of them of other verbs.

Since these alternative analyses fail to capture some generalizations behind linguistic data, we have to come up with a stronger analysis to rule out non-existent expressions. I propose that distinct syntactic constructions indeed bear on the distinct surface lexical meaning, but some verbs, such as pao ‘to run’ and zou ‘to walk’, are intrinsically not able to enter certain constructions and acquire motionless state meanings, because of their lexical semantic restrictions. Those that can have both readings can be marked as [+ → –active]. Verbs that have only [+active] reading must be selected by a light verb DO or CAUSE, or EXIST. The inceptive motional meaning of [+ → –active] verbs is licensed by light verbs such as DO and CAUSE; the motionless state meaning is licensed by the [+ → –active] feature specified in the lexicon.

This analysis successfully tells apart the distinct behaviors of two types of verbs in imperative sentences. However, there are still some verbs behaviors of which still
puzzle us: verbs such as xie ‘to write’ can only denote motionless states in certain constructions but not in others. Xie is a [+ → –active] verb. It can denote an inceptive motional action in Xiaoli xie le yi-feng xin ‘Xiaoli wrote a letter’, it can also denote a motionless state in qiang shang xie-zhe san-ge zi ‘There are three characters on the wall’. However, it cannot occur with -zhe in imperative sentences: *xie-zhe! This inconsistent behavior of writing/painting verbs such as xie in different constructions may be explained by finer lexical specifications: when xie is [-active], it must be also marked as [-volitional]. Therefore, xie cannot co-occur -zhe in imperative sentences.

3.1.4 Durativity – defining feature

Another basic lexical aspectual feature is durativity, which I have mentioned more or less in the above discussions. It is intuitively clear that -zhe is semantically encoded with a durative meaning. All the uses of -zhe in imperative and subjunctive sentences involves implicit duration of time. Verbs that involve momentous action are not possible with -zhe. This feature is closely connected to the [-active] feature, since [-active] feature is a sufficient condition for [+durative] feature.

Although [+durative] can be derived from [-active], we should still specify this feature in the lexicon. Durativity is the defining feature, while [-active] involves selection restrictions.

3.1.5 Telicity

Since -zhe selects [+durative] and [-active] verbs, no change of state and termination is encoded in its meaning. The [-telic] meaning is encoded in the [-active] verbs. Therefore, -zhe is also marked as [-telic], which is derived from its [-active] feature. Therefore we do not need to specify this meaning in the lexicon.

In summary, -zhe does not specify the ER-RT intersection, it has the [+durative]
and [-active] semantic feature.

3.2 –zha\textsubscript{A} (–zhe as an aspectual marker)

In declarative sentences –zhe can co-occur with a wide range of verbs as we have seen in locative existential sentences, in canonical declarative sentences, in certain adverbial subordinate clauses, and certain multiple serial verb constructions in Chapter 2. In this section I will focus most of my attention on the imperfective aspectual properties.

3.2.1 Reference time is encoded semantically (Imperfective marker)

According to Olsen (1997), an imperfective aspectual morpheme places its RT on the nucleus portion of the ET of a situation, as is represented by the following schema:

(13) Imperfective aspect:

\[
\begin{align*}
\text{nucleus} & \quad < \quad \text{coda} \\
\text{ET} & \quad | \\
\text{Time} & \quad \text{----RT---------}\rightarrow
\end{align*}
\]

The imperfective property of –zha\textsubscript{A} is evident in adverbial subordinate clauses and multiple serial verb clauses, where each -zha\textsubscript{A} in the sentence requires a reference time that connects it to the event time or reference time of another event. To illustrate, I will show how the imperfective meaning works out in subordinate and juxtaposition-of-events sentences:
(14) a. laoban pai-zhe zhuozi ma ren

boss hit-Impv table scold person

'The boss, pounding the table, scolded someone.'

b. Xiaoli yibain che-zhe hanbao, yibian kan-zhe dianshi

p.n. one-side eat-Impv hamburger one-side watch-Impv TV

'Xiaoli ate hamburger, and at the same time he watched TV.'

The temporal relation of the two events of (14a) is schematized as the following:

(15) \[ \text{E}_1, \text{R}_1 \quad (\text{laoban pai zhuozi}) \]
    \[ \text{E}_2, \text{R}_2 \quad (\text{laoban ma ren}) \]

In these sentences the notion of RT is obligatory, or the semantic interpretation of the temporal relations cannot be established.

Note that the yibian....yibian construction may also have the imperfective function. In addition, it may seem to be the case that it is the yibian....yibian construction that gives the clauses imperfective meanings since -zhe is in most circumstances optional in this construction. However, I argue both -zhe and yibian....yibian contribute to the imperfective meaning in which RT is (a) focused on the internal constituency of ET and (b) linked to an RT of another event. The following sentences support my argument:

---

7 In this construction -zhe may have multiple functions in addition to imperfectivity. As is observed by Chen (1992: 59-78), adverbial subordinate clauses marked by -zhe not only entails simultaneity of events, but it also entails interrelationship and prominence constraints between the first VP and the second VP. It is possible that these functions in adverbial clauses come from their syntactic position (adjunction) instead of -zhe itself. I leave this issue open.

8 I follow Mei's (2002) adoption of Reichenbach's temporal schema (Reichenbach 1947, Hornstein 1990). The comma signifies simultaneity relation. Since by definition in the imperative aspect RT is focused on the internal stages, the 'coda' of the situation, it is interpreted as being simultaneous with the ET.
(16) a. *Ahao pao-zhe, tiao-zhe, jiao-zhe, feichangde kaixin
   p.n. run-Impfv bounce-Impfv shout-Impfv very happy
   ‘Running, bouncing, and shouting, Ahao is very happy.’

b. Xiaoli cuiba chi-zhe bingbang, yanjing hai kan-zhe jituei
   p.n. mouth eat-Impfv popsicle eye still watch-Impfv drumstick
   ‘With his mouthful of popstick, Xiaoli still watched the drumsticks.’

(16a,b) do not belong to the yibian.....yibian construction, yet the imperfective
meaning is still present. It is evident –zhe is an imperfective marker in these
sentences.

We have discussed the imperfective meaning of –zhe in adverbial clauses and
subordinate clauses, but not the matrix clauses. Does it also have an RT in the matrix
clauses? First consider the following sentences:

(17) a. beifeng mengliede gua-zhe
   north wind fiercely blow-Impfv
   ‘The north wind blew fiercely.’

b. *beifeng mengliede gua-zhe san tian
   north wind fiercely blow-Impfv three day

(18) a. Xiaoli butingde pao-zhe
   p.n. without stop run-Impfv
   ‘Xiaoli ran without stop.’

b. *Xiaoli pao-zhe yi-ge xiaoshi
   p.n. run-Impfv one-Cl hour

Although the English translations are in the simple past form, it does not mean they
are unmarked for aspect. In fact, these sentences are not compatible with duration complements, as are shown in (17b) and (18b). Since duration complements serve as a standard test for perfectivity, and we have established in subordinate clauses –zhe is imperfective, it follows that the ungrammaticality of (17b) and (18b) is due to the conflict of imperfective and perfective meanings in the same clause. In terms of the schema, the RT is focus both at the nucleus and at the coda.

\[
[nucleus < coda] \text{ET} \\
\downarrow \\
\text{Time------RT------>}
\]

These facts all support the imperfective aspectual meaning of –zhe.

### 3.2.2 [±active]

From the above examples we can see that –zhe\textsubscript{A} can co-occur with [+dynamic], or [+active] verbs. Is it able to co-occur with [-active] verbs as well? The answer is positive, since in adverbial subordinate clauses, which are specified with an RT, –zhe can co-occur with [-active] verbs, as is shown in (16b). Except for individual-level predicates, almost all kinds of the verbs from the dynamicity spectrum are felicitous with –zhe\textsubscript{A}. This freedom of selection restriction is congruent with its inflectional status.

### 3.2.3 Durativity – defining feature

[+Durative] feature is clearly a defining feature of both –zhe\textsubscript{P} and –zhe\textsubscript{A}. In fact adverbs of universal quantification such as zongshi ‘always’, yizhi ‘constantly’, and butingde ‘without stop’ are quite felicitous with –zhe\textsubscript{A}. Verbs underspecified for durativity (e.g. pai ‘to pound’, qiao ‘to knock’, and chuei ‘to hammer’) are imposed
with [+durative] feature when suffixed by -zhe.

(19) a. Xiaoli qiao-zhe etou, zai xiang xinshi
   p.n. knock-Impv forehead Prog think thought
   'Knocking on his forehead (iteratively), Xiaoli is dwelling on his thoughts'

b. laoban pai-zhe zhuozi ma ren
   boss hit-Impv table scold person
   'The boss, pounding the table, scolded someone.'

Verbs such as qiao and pai are not specified for [+durative] in the lexicon. They can denote [-durative] actions if one only knocked the door or pounded the table once. When they are suffixed by -zhe, they are forced with a durative meaning; therefore they acquire the iterative meaning.

With verbs specified for [+durative], such as pao 'to run', xia-ju 'to rain', suffixation of -zhe imposes [+imperfective] and other aspectual and modal meaning, without necessarily intensifying the [+durative] meaning.

3.2.4 Telicity

Typical activity verbs such as chi 'to eat', xie 'to write', zou 'to walk' are quite felicitous with -zhe. They are not specified for the [+telic] feature. Typical achievement verbs such as jin 'to enter', dao 'to arrive', and si 'to die' do not co-occur with -zhe. They are specified for the [+telic] feature. It seems that only verbs that are not specified for [+telic] are felicitous with -zhe.

Unfortunately, if we dig the data more thoroughly, we discover that some [+telic] verbs are able to co-occur with -zhe. Consider the following sentences:
(20) a. *puoli da-po-zhe
   glass hit-break-Impfv
   b. sixu zai naochung buduan de chengxing, ye buduan de da-po-zhe
   thought Loc brain incessantly form up also incessantly hit-break-Impfv
   ‘Thoughts incessantly form and break down in the brain.’

(21) a. *ta chi-zhe liang-zhi ji
   he eat-Impfv two-Cl chicken
   (From Lin, to appear in THJCS)
   b. ta tongshi chi-zhe liang-zhi ji (Ibid.)
   he same-time eat-Impfv two-Cl chicken
   ‘He ate two chicken at the same time.’

They are two counterexamples to the claim that -zhe A cannot co-occur with [+telic] verbs. First, a VRC verb such as da-po is a typical achievement verb bearing the [+telic] feature. When the predicate is modified by a universal quantificational adverb such as buduan de ‘incessantly’, the sentence becomes good in (20b). Second, a transitive activity verb taking countable NP complements is typically marked as [+telic] (Smith 1991, Olsen 1997). However, when it is modified by a special kind of temporal adverb such as tongshi ‘at the same time’, the predicate is able to accommodate –zhe in (21b). How should we explain these sentences?

There are three ways out of this puzzle. First, we might propose that –zhe A is not prohibited to co-occur with [+telic] verbs. The unacceptability of (20a) is due to the absence of the [+durative] feature of the predicate; while the unacceptability of (21a) is due to the [+perfective] meaning provided by the activity verb + count noun combination. The addition of the quantificational adverb in (20b) provided the [+durative] feature; and the addition of the ‘same time’ adverb in (21b) provides the [+imperfective] feature and overrides the [+perfective] meaning - the latter may be a
conversational implicature. This proposal seems to work, although it still has to account for the incompatibility of -zhe and certain achievement verbs, such as qu ‘to go to’, jin ‘to enter’, dao ‘to arrive’:

(22) a. *Xiaoli dao-zhe Hsinchu
   p.n. arrive-Impfv Hsinchu

   b. *Xiaoli buduan de dao-zhe Hsinchu
   p.n. incessantly arrive-Impfv Hsinchu
   ‘He ate two chicken at the same time.’

A possible explanation is that verbs such as dao and qu, unlike da-po, are inherently marked as [-durative]. They can never be marked as [+durative], even if they are modified by universal quantified adverbs. Therefore, they never co-occur with -zhe.

Second, we might still propose that -zhe cannot co-occur with [+telic] verbs. Verbs such as da-po and activities + count noun combination are not specified for the [+telic] before they are composed with -zhe. The unacceptability of (20a) and (21a) are due to the strong conversational implicature of their [+telic] feature, but they can be cancelled by the addition of elements signifying atelicity. Verbs such as qu and dao are encoded with the [+telic] feature; therefore they are out no matter what elements are added. If this is correct, we will have to present a very different feature specification from the widely adopted analysis of Smith (1991) and Olsen (1997). We will also have to factor in a complex system of underspecification in our algorithm of aspectual features.

Third, we might propose that although -zhe is barred from co-occurring with a [+telic] VP complements, it does not care about the feature specification of the verb
itself. Thus quantificational adverbs and ‘same time’ adverbs provides the [-telic] feature for the VP. –Zhe only checks the atelicity of the VP complement, but not the verb itself. This analysis seems to be straightforward, but we have to device a complex algorithm that is able to switch to [+telic] or [-telic] feature under complex conditions, and runs afoul of Olsen’s “monotonic composition” principle.

It seems that the first approach is superior then the other two. The proposal the –zhe does not have a constraint barring its co-occurrence with [+telic] verbs or VPs makes its feature specification simpler. It does not need addition complex underspecification and feature switching algorithms of the second and third approaches.

To summarize, -zhe as an aspectual marker has the [+imperfective] grammatical aspect feature, and the [+durative] lexical aspect feature. The main aspectual features of -zhe\textsubscript{A} and -zhe\textsubscript{P} are listed in the following table:

\begin{center}

\begin{tabular}{|c|c|c|}
\hline
\textbf{Morphemes} & \textbf{Lexical} & \textbf{Grammatical} \\
\hline
\text{[active]} & \text{[durative]} & \text{[imperfective]} \\
\hline
-\text{zhe}_{\text{A}} & & + \\
\hline
-\text{zhe}_{\text{P}} & - & + \\
\hline
\end{tabular}

\end{center}

\textit{(23) Lexical and grammatical semantic features of} –zhe\textsubscript{A} \textit{and} –zhe\textsubscript{P}.

3.3 \textbf{How do we distinguish between -zhe\textsubscript{A} and -zhe\textsubscript{P} in a given sentence?}

I have answered the first two questions I asked at the beginning of Section 3. We are now able to tell apart the distinct semantic features of -zhe\textsubscript{A} and -zhe\textsubscript{P}. Now we should be able to tell them apart by verb types alone without the imperative sentence diagnostic. Unfortunately, as we can see in table (23), –zhe\textsubscript{A} is not specified with
respect to [±active] feature. Its [±imperfective] feature comes from the existence of an RT element, which is not inherently encoded on the verb. In other words, \(-zhe_A\) can select verbs that can be selected by \(-zhe_P\). So how do we distinguish between these two \(-zhe\)?

First, I have shown in Chapter 2 and section 3 of this chapter that in imperative sentences only \(-zhe_P\) is possible. This is the most clear diagnostic of \(-zhe\)'s status.

Second, I assume that whenever an RT is present, \(-zhe_A\) is also present. Since \(-zhe_A\) is already specified with the [+durative] feature, \(-zhe_P\) is not necessary, as is shown in the following sentences:

\((24)\) a. Aming chuan-zhe tuoxie shangke

\begin{align*}
p.n. & \text{ wear-Impfv slipper attend class} \\
& 'Aming attended the class wearing slippers.'
\end{align*}

b. qiang shang gua-zhe yi-fu guohua

\begin{align*}
\text{wall on } & \text{ hang-Impfv one-CI chinese painting} \\
& 'There is a Chinese painting on the wall.'
\end{align*}

In \((24a)\) chuan is a [-active] verb, and the concurrence of the two events requires the RT element, so the aspectual \(-zhe\) is present. In \((24b)\) gua in locative sentences is also [-active]. Since aspectual markers are obligatory in indicative locative existential sentences, I assume an RT must be present in these sentences. Therefore, the imperfective \(-zhe\) is present in the sentence.

4. \(-zhe_A\) vs. \(zai\)

Any treatment of the semantics of \(-zhe\) has to account for its semantic relations with the more frequently used progressive marker \(zai\). I will first examine their shared
semantic features.

4.1 [+imperfective]

(25) a. *Xiaoli jinlai-de shihou, wo zai nian shu
      p.n. enter-Re time I Prog read book
      'I was reading when Xiaoli entered.'

b. *Xiaoli yibian chi-zhe hanbao, yibian kan-zhe dianshi
      p.n. one-side eat-Impfv hamburger one-side watch-Impfv TV
      'Xiaoli ate hamburger, and at the same time he watched TV.'

Both in (25a) and (25b), the temporal relations between the two events require
the RT element, which provides the temporal relation, as is shown in the following
schema:

\[ E_1, R_1 \]
\[ \quad | \]
\[ E_2, R_2 \]

In addition, both -zhe and zai are not able to co-occur with duration complements:

(26) a. *Xiaoli budande pao-zhe wu fenzhong
      p.n. without run-Impfv five minute

b. *Xiaoli zai pao wu fenzhong
      p.n. Prog run five minute

These properties suggest they both bear the [+imperfective] grammatical feature.
4.2 Incompatibility with [-durative] verbs

In addition to the [+imperfective] feature, zai and \(-zhe_A\) also have some shared selection restrictions of their VP complements. Both of them cannot co-occur with some achievement verbs such as dao 'to arrive', qu 'to go to', si 'to die', zhongjiang 'to win lottery'. As I have discussed in length in 3.2.4, the fact that \(-zhe_A\) cannot co-occur with these verbs may be due to their inherent [-durative] feature (not because of their [+telic] feature), and \(-zhe_A\)’s [+durative] meaning. The fact that zai cannot co-occur with them may be due to their inherent [-durative] meaning too. Zai seems to be [+durative] in some sense. However, zai is different from \(-zhe\) with regard to the durativity in that it does not impose durativity feature by iterating events. Thus, Xiaoli zai qiao men 'Xiaoli is knocking at the door' does not necessarily entail that Xiaoli knocked on the door more than once.

In 4.4 I will discuss how verbs and VPs such as qiao men 'knock at the door', which typically lack duration, are compatible with zai. For now I will simply assume that although they typically lack duration, they are not specified with [-durative] feature. Therefore, they can somehow be interpreted as [+durative] and hence be compatible with zai.

4.3 [± active]

In spite of their status as grammatical imperfective markers, zai and \(-zhe\) has numerous different semantic properties. As we have seen in locative existential and adverbial sentences, both [+active] and [+ \(\rightarrow\) – active] verbs can be suffixed by \(-zhe_A\). Zai also can co-occur with [+active] or [+ \(\rightarrow\) – active] verbs, but only [+active] reading can be obtained from verbs co-occurring with zai.
(27) a. *Xiaoli zai na xingli
    p.n.  Prog take baggage
         ‘Xiaoli is taking the baggage.’  [+active] reading
    b. *Xiaoli shou li zai na xingli
    p.n.  hand in Prog take baggage  [-active] reading

Na is a [+ \rightarrow − active] verb. When it co-occurs with zai, it can only have the inceptive [+active] reading. The [-active] reading is never possible with zai, as is shown in (27b). We can mark zai as [+active].

4.4 Habitual meaning and fuzziness and durativity

Consider the following sentences:

(28) a. Ade zai nian daxuei
    p.n.  Prog study university
         ‘Ade studies at the university.’
    b. ??Ade nian-zhe daxuei
    p.n.  study-Impfv university
         # ‘Ade studies at the university.’
(29) Xiaoli zai qiao men
    p.n.  Prog knock door
         ‘Xiaoli is knocking on the door.’

Zai can occur in habitual situations that are compatible with the progressive meaning. The time span of the RT is larger in these events. During the time span there may be various subevents that are irrelevant to the main event. For example, in (28a)
Ade may be having a summer vacation now, but he is still in the superevent of 'study at the university' at the RT. \( Zhe_A \) does not seem to have this usage in (28b). In (29), the event of knocking on the door does not require the knocking to be iterative; a single knock is possible. In addition, this event may include Xiaoli's considering how she should knock the door at the doorway and other related situations. The progressive zai thus has a fuzziness character. This fuzziness character, instead of iterativity, makes a single knocking event compatible with [+durative], and therefore compatible with zai.

4.5 Tense

Although both zai and the imperfective \(-zhe_A\) are linked to the RT element, when selecting [+active] verbs only zai can be anchored to the speech time easily via linguistic contexts or conversational implicature. The following examples make a clear contrast:

(30) a. *Xiaoli zai chi-fan

\[ \text{p.n. Prog eat} \]

‘Xiaoli is eating.’  (present tense reading)

b. ??*Xiaoli chi-zhe fan\(^9\)

\[ \text{p.n. eat-Impfv meal} \]

# ‘Xiaoli is eating.’  (present tense reading)

(30a) can have a present time reading, but (30b) cannot, and the sentence is also not very good. This contrast suggests although zai is by no means marked for present

\(^9\) If this sentence has a sentence-final particle ne (Xiaoli chi-zhe fan ne), it becomes a good sentence for some Mandarin speakers and may acquire the present tense reading. However, it is still semantically distinct from (30a). This semantic and perhaps pragmatics difference has yet to be extensively investigated.
tense, it can be readily assigned a present tense reading when there are no other temporal elements in the sentence. I will discuss this contrast and explore the availability of tense anchoring in Chapter 4.

5. Other semantic properties of -zhe

In addition to the aspectual properties of -zhe, there are also some idiosyncratic non-aspectual semantic properties and dialect-specific temporal meanings. I will discuss some of them in this section.

First, it has been observed by Liu (1985) that -zheA has a very high frequency in the descriptions and directions of scripts, much higher than its occurrence in the conversations of the scripts. This high frequency within a certain register of language suggests that -zheA has a special narrative function.

Second, it is observed by Sawada (1993) that while the progressie zai can co-occur with all kinds of modal elements denoting the attitudes of the speaker, -zheA is generally not compatible with these elements. Theses modal elements include haoxiang ‘likely’, muofei ‘unless’, yuanlai ‘after all’, shi ‘indeed’, yiding ‘certainly’, etc. On the other hand, -zheA is quite felicitous with manner adverbs without the subjective judgments of the speaker. I tentatively mark this absence of subjective judgments as the [-subjective] feature that transcends pure subjective judgments.

Third, in Beijing Mandarin, -zhe may occur in middle constructions.

(31) a. wen-zhe chou, chi-zhe xiang

smell-ZHE stinky, eat-ZHE delicious

‘It smells bad, but tastes good.’
b. *zhe fangzi zhu-zhe hen shufu*

this house live-ZHE very comfortable

‘It is very comfortable to live in this house.’

The term ‘middle’ comes from the construction’s status between the active and passive voices in languages such as Greek. In this construction the events are not limited to a specific temporal frame and have generic tense reading. In Taiwan Mandarin –zhe is typically replaced by *qilai*, which is originally an orientation suffix. This reading is certainly connected to –zhe’s incompatibility with present tense reading.

These properties for –zhe still requires extensive investigation from the perspectives of semantics, syntax, and pragmatics.

6. Conclusion

In summary, –zhe_p, –zhe_A, and zai have the following distinct features:

(32) Aspectual and tense features of –zhe_p, –zhe_A, and zai

<table>
<thead>
<tr>
<th>Morphemes</th>
<th>Features</th>
<th>Lexical</th>
<th>Grammatical</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[active]</td>
<td>[durative]</td>
<td>[imperfective]</td>
</tr>
<tr>
<td>–zhe_p</td>
<td>–</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>–zhe_A</td>
<td></td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>zai</td>
<td>+</td>
<td>(+)</td>
<td>+</td>
</tr>
</tbody>
</table>
Chapter Four

Tense Interpretation and Syntactic Structure of Sentences Inflected by -zhe

0. Introduction

The concept of time is of paramount importance in human cognition and linguistic expressions. Generally speaking in declarative sentences events must be related to time in certain fashions.¹ This is why sentences such as Mary eat and Xiaoli wan youxi ‘lit. Xiaoli play games’ are not good sentences.² They are not marked by temporal expressions such as tense and aspectual markers; therefore the events they express cannot be related to a temporal frame. Temporal information is thus obligatory in declarative sentences.

In Chinese it is also the case that declarative sentences require tense interpretations, which are often expressed by aspectual markers and contexts. However, not all sentences marked by aspectual markers alone are able to have tense interpretation. In section 4.5 of Chapter 3 I have briefly discussed the fact that the temporal semantic properties of -zhe are distinct from those of zai: -zhe is unable to acquire a tense interpretation when it co-occurs with a [+active] verb.³ Consider again the following sentences:

---

¹ In non-declarative sentences temporal information may be indirectly expressed by modal elements.
² These sentences may become acceptable when they acquire special modal meaning or are put in certain linguistic contexts. For example Mary eat is a good sentence if it is construed as an order. Xiaoli wan youxi is acceptable in the context of directing a drama or issuing assignments: e.g. Xiaomig kan dianshi, Xiaoli wan youxi ‘Xiaoming watch TV, Xiaoli play games’.
³ For expository reasons, in this chapter -zhe generally represents -zheX if not stated otherwise.
(1) a. *Xiaoli* zai *chifan*

p.n. Prog eat

‘Xiaoli is/was eating.’
(present or past tense reading available)

b. ?? *Xiaoli* chi-zhe *fan*

p.n. eat-ImpfV meal

# ‘Xiaoli is eating.’
(no tense interpretation available)

c. *Xiaoli* chi-zhe *fan ne*

p.n. eat-ImpfV meal MP

‘Xiaoli is/was reading!’
(present tense reading available)

Sentences with the progressive *zai* do not require sentence final particles or other elements to be a good sentence. Sentences inflected by *―zhe*, however, generally require some elements such as the modal particle *ne* and those constructions we have seen in the previous chapters: locative existential sentences, sentences with [-active] verbs, adverbial clauses, and sentences modified by certain manner adverbials are all ‘complete’ sentences. Sentences only marked by *―zhe* still fails to be related to the temporal frame, as is shown in (1b).

It is now getting clear that we have several patterns of tense interpretation. First, *zai* and *―zhe* are different in their tense anchoring properties. Second, *―zhe* has different tense anchoring abilities in different sentences. The aim of this chapter is to unravel the underlying motivations behind these patterns with a syntax-semantics-interface approach. To this aim, I will address the following questions:

(a) What are the additional elements that make *―zhe*-inflected sentences good sentences?

(b) Why does they make the sentences good?
(c) What is the difference between –zhe and zai that exempt zai from additional elements in (1a)?

1. Tense anchoring and ‘completeness’ in –zhe-inflected sentences

In the previous chapters we have encountered various types of –zhe-inflected sentences that are ‘complete’ and are able to have tense interpretation. In this section we discuss what are the elements that make them available to tense interpretations. I will focus on sentences of which the main verbs are suffixed by –zhe, since they directly bear on the issues of tense anchoring. My analysis is based on two widely held assumptions: events must be anchored to tense, and events must be marked for aspect.

1.1 Locative existential sentences

(2) a. qiang shang gua-zhe yì-fū hua
    wall  on  hang-Impfv one-CL picture
    ‘A picture hangs on the wall.’

b. Ade kang-zhe yì-dài mì
    p.n.  carry-Impfv one-sack rice
    ‘Ade is carrying a sack of rice on his shoulder.’

c. tai shang chang-zhe yì-chū xi
    stage on sing-ZHE one-Cl play
    ‘An opera is playing on the stage.’

Locative existential sentences by definition have an existential meaning. This

---

4 Although this sentence does not seem to have a locative argument, the subject/agent can be regarded as the location, an observation made by both J. Lin (to appear) and T. Lin (2001).
existential meaning is obviously relevant to tense anchoring; since when the verbs in
(2) are replaced by the existential verb you, no aspe ctual markers are necessary:

(3) qiang shang you yi-fu hua
    wall on exist-Impfv one-CL picture
    ‘There is a picture on the wall.’

Existential verb you and the locative existential construction have certain special
properties that are related to tense anchoring. First, LE constructions that use verbs
other than you need to be marked by aspe ctual morphemes or you itself (such as qiang
shang gua-you yi-fu hua); because these verbs generally have [+active] and [-durative]
meaning in other constructions, durative marker –zhe or existential marker you is
necessary to mark their existential stative meaning.⁵ Second, if you is the main
predicate, it does not need to take an aspe ctual marker. It is like stative verbs such as
xihuan ‘like’, which does not take aspe ctual markers. These two properties suggest
that LE sentences may or may not access tense interpretations via aspe ctual markers. I
propose that when they are ‘bare’ or suffixed by –zhe, they acquire tense anchoring
from the existential verb or construction itself. The details of this phenomenon merit
further research.

1.2 Sentence-final modal particle ne

(4) Xiaoli chi-zhe fan ne
    p.n. eat-Impfv meal MP
    ‘Xiaoli is eating!’

⁵ For LE sentences with [+active] verbs, the function of –zhe may be related to an evidential meaning
(Mei 2001). Again –zhe in this construction is not a simply aspe ctual marker.
In (4) the sentence is anchored to tense via the sentence final particle *ne*. According to Tsao(2002), in sentences such as (4) *ne* means 'unchanged state', and may have extended discourse meaning that suggest what another speaker has said is not conclusive. This ‘unchanged state’ meaning and its syntactic position avail the sentence to tense anchoring. It co-occurs with the durative *-zhe* to augment the durative progressive meaning. Since *ne* is a modal element and is compatible with the progressive and durative aspects, it is naturally capable of tense anchoring.

1.3 Sentence marked by certain manner adverbs

(5) *Xiaoli xin buzai yende  chi-zhe fan*

p.n. absent-mindedly eat-Impfv meal

‘Xiaoli ate absent-mindedly.’

The literature has paid Manner adverbs such as *jingjingde, xin buzai yende*, etc. may induce a narrative, non-subjective force. This narrative force enables them to anchor to tense. The nature of this narrative force is still unclear. This kind of expression usually appears in narrative discourses such as novels.

1.4 The *yibian...yibian* construction and serial verb constructions

(6) *Xiaoli yibian chi-zhe hanbao, yibian  kan-zhe dianshi*

p.n. one-side eat-Impfv hamburger one-side watch-Impfv TV

‘Xiaoli ate hamburger, and at the same time he watched TV.’

In this construction two events are linked together via the *yibian...yibian* construction. These two *yibian* have aspectual functions that signify simultaneity, and also have tense anchoring ability.
1.5 Non-main verbs that are suffixed by \(-zhe\) and some idiomatic constructions

(7) a. laoban pai-zhe zhuozhi ma ren

   boss  pound-Impfv table scold person

   'The boss, pounding the table, scolded someone.'

b. Xiaoli  mang-zhe nian shu

   p.n. busy-Impfv study

   'Xiaoli is busy studying.'

In the previous constructions \(-zhe\) is affixed to the main verb of the sentence. In constructions such as (7a) V-\(zhe\) is located in the position of an adverb. This kind of sentence acquires tense anchoring from the functional categories in the matrix clause. In (7b) the verbs selects a VP complement. The number of the verbs allowed in this construction is limited. For now, I will not explore this construction further. I assume that they are idiomatic expressions that have a distinct mechanism of tense anchoring.

In summary, when \(-zhe\) is suffixed to the main verb of the sentence, it by itself is not able to anchor to tense. Other linguistic elements such as existential meanings, modal particles, manner adverbs, and certain aspectual constructions such as the \(yibian\)-construction are necessary for the interpretation of tense. Their semantic role in tense anchoring must be more thoroughly investigated. In the following section I will examine the syntactic accounts of tense anchoring.

2. \(-Zhe\) vs. \(zai\) in tense anchoring

We have found that \(-zhe\)-inflected sentences are able to anchor to tense in the above section. After a careful examination we found that the tense they typically acquire is often different from that of \(zai\)-inflected sentences. In LE sentences the
present tense is available and the events may describe a present state. In sentences with modal particle *ne* present tense reading is available: *ne* is a modal compatible with progressive meaning. In sentences with manner adverbs the tense is related to the narrative force of the adverbs. They usually occur in narrative discourses such as novels and drama scripts. The tense interpretation is usually embedded under the narrative discourse and is different from those of the other aspectual markers. They are similar to Comire’s (1976) narrative present, although they are not tense markers. In *yibian* sentences, the tense is related to the simultaneity of two or more events. The tense interpretation is also usually embedded under the narrative discourse. The following table is the summary of these tense interpretations.

(8) *Availability of present tense interpretations in various –zhe inflected sentences*  

<table>
<thead>
<tr>
<th>Sentence type</th>
<th>Property</th>
<th>availability of present tense reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locative existential sentences</td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>Sentences with MP <em>ne</em></td>
<td></td>
<td>+</td>
</tr>
<tr>
<td>sentences with manner adverbs</td>
<td></td>
<td>? (narrative)</td>
</tr>
<tr>
<td><em>yibian</em> sentences</td>
<td></td>
<td>? (narrative)</td>
</tr>
</tbody>
</table>

In *zai*-inflected sentences, on the other hand, the present tense reading is readily available. This contrast between *-zhe* and *zai* must be accounted for.

It is also the case that *zai* is compatible with speaker-oriented modal elements as those I have mentioned at the end of Chapter 3. I have also proposed a [subjective] feature to account for their differences. This feature, I will show, is directly relevant to tense anchoring.

In the following section I will show that modern syntactic theories have provided
a uniform account to derive all of these temporal interpretations from syntactic structures.

3. Tense anchoring and phrase structure

Modern syntactic theories of generative grammar have provided a phrasal projection for tense interpretation, TP, initiated by Pollock’s (1989) Split-Infl Hypothesis. Some linguistics have further explored the interpretation of tense and/or aspect in terms of this view of syntactic architecture (Stowell 1996, Giorgi and Pianesi 1997). I will go alone with this line of analysis and explore some untouched territories in my account of tense anchoring and interpretation in Mandarin.

As a point of departure, the following tree diagram serves my purpose to clarify some concepts:

(9) Phrase structure for English sentence Binks ate a clam

\[
\begin{array}{c}
\text{AGRP} \\
\text{NP} \quad \text{AGR'} \\
\text{AGR} \quad \text{TP} \\
\text{T'} \\
\text{T} \quad \text{VP} \\
\text{V'} \\
\text{V} \quad \text{NP} \\
\end{array}
\]

Binks [3sg] [past] eat a clam

The tree diagram of (9) is the "deep structure" representation of the sentence "Binks ate a clam" in GB framework. The tense phrase (TP) is located higher then the verb phrase. At the surface structure or phonetic form level of the syntactic representation,
the [past] affix is then "lowered" or undergo "affix hopping" to the verb *eat* to derive the sentence we hear or speak. I will follow this analysis without delving into issues of lowering and affix hopping. Another important concept I shall make clear is the morphosyntactic status of *T*. Following Stowell, I draw a distinction between morphological tense and the abstract X-bar category *TENSE*. Since Mandarin has no morphological tense, this distinction is necessary in all accounts of Mandarin tense interpretation mechanisms.

Equipped with basic concepts and assumptions, we can now propose the phrase structure of Mandarin sentences inflected with *-zhe* or *zai*:

(10) *Phrase structure of Mandarin aspectual markers -zhe and zai*\(^6\)

\[
\begin{align*}
\text{TP} & \\
T' & \\
T & \\
[S/R] & \\
[+S] & \\
\text{AspP} & \\
\text{Asp'} & \\
\text{Asp} & \\
[R/E] & \\
VP & \\
V' & \\
V & \\
x &
\end{align*}
\]

\[\text{zai}[+T]/\text{-zhe}_A[-T] \quad \text{zhe}_P\]

In (10) TP is the highest of all lexical projections. *T* is not morphologically realized, but its syntactic status is crucial for tense interpretations (cf. J. Lin 2002). In this category the temporal relations between ST and RT is specified. The AspP position

---

\(^6\) I assume the other aspectual markers *-le* and *-guo* are also specified with the [+S(ubjective)] feature.
under TP is where various aspectual markers situated. The difference between \(-zhe\) and other aspectual markers is related to its [-T] feature, which follows from its non-subjective feature. The mismatch where \(-zhe_A\) is syntactically higher but phonetically lower than the verb is created by either lowering or affix hopping. \(-Zhe_P\) is located within the head of VP. With this phrase structure we will be able to provide a simple formal account of the intricate tense anchoring properties of \(-zhe\).

3.1 Sentences marked by the progressive marker \(zai\)

I propose that different tense anchoring abilities are encoded in the syntax-semantics interface. The progressive aspectual marker \(zai\) is available with present tense reading in a conversion, it is close to the TENSE category and has a feature relevant to tense: [+T]. This feature is relevant to tense because tense in its essence is deictic and is about the temporal relation between RT and ST. ST is the time viewed from the viewpoint of the speaker and is therefore subjective. In LF the relevant features must be checked off, therefore \(zai\) moves to T in LF. This checking requirement is the syntactic version of the tense anchoring requirement. The following tree diagram illustrates how \(zai\) is licensed.

\begin{equation}
(11) \text{Syntactic position of } zai \text{ and its aspectual licensing}
\end{equation}

\begin{center}
\begin{tikzpicture}
    \node (TP) {TP}
    \node (T') [below of=TP] {T'}
    \node (T) [below of=T'] {T}
    \node (AspP) [below of=T] {AspP}
    \node (s/r) [below of=AspP] {S/R}
    \node (Asp') [below of=s/r] {Asp'}
    \node (VP) [right of=Asp'] {VP}
    \node (Asp') [right of=Asp] {Asp'}
    \node (r/e) [below of=Asp'] {R/E}
    \node (zai) [below of=r/e] {zai [+T]}
    \node (V) [right of=zai] {V'}
    \node (V') [right of=V] {V}
    \draw[->] (TP) -- (T')
    \draw[->] (T') -- (T)
    \draw[->] (T) -- (AspP)
    \draw[->] (AspP) -- (s/r)
    \draw[->] (s/r) -- (Asp')
    \draw[->] (Asp') -- (VP)
    \draw[->] (Asp') -- (r/e)
    \draw[->] (r/e) -- (zai)
    \draw[->] (zai) -- (V)
    \draw[->] (V) -- (V')
    \node [below of=LF movement] {LF movement}
\end{tikzpicture}
\end{center}

Ex. Xiaoli \(zai\) chi fan ‘Xiaoli is eating.’
In (11), the aspectual marker zai is moved to the higher temporal element T, which represented the syntactic category TENSE. Its interpretation is also determined by the interpretation of T. The present tense reading is available when the context gives the sentence a present tense reading.

3.2 Incomplete sentences marked by –zhe

-Zhe, on the other hand, is [-T] in its feature specification. It is unable to check off the [+T] feature in T. In LF the feature in T is not checked, therefore the derivation crashes.

(12) The failure of tense anchoring of –zhe in [+active] sentences

```
TP
  /―\
 /\  /
T' 1
 /  /
 [S/R] AspP
 /   /
[+T] Asp
     /  /
    Asp VP
     [R/E] -zhe [-T] V'
```

Ex. ??Xiaoli chi-zhe fan

It follows in this phrase structure that for the feature in T to be checked off, elements other than –zhe must be raised to T. Otherwise, T will be left unanchored.

3.3 Sentences with MP ne

In sentences containing an MP ne, tense anchoring is achieved by the feature checking between T and M. T is raised to M to have its feature checked off.
(13) Tense anchoring in sentences with MP ne

Ex. Xiaoli chi-zhe fan ne ‘Xiaoli is eating!’

3.4 LE sentences

In locative existential sentences, the sentence has a stative existential meaning. In light verb analysis verbs such as gua ‘to hang up’ are moved to a higher syntactic category: the light verb EXIST. The light verb is stative verb on par with its overt counterpart you and verbs such as xihuan ‘to like’ and taoyen ‘to hate’. –zhe in LE sentences is not an aspectual marker, it only marks the [+durative] and [-active] verbal features. It is possibly a –zhep. Since stative verbs, individual or stage-level alike, are not required to bear aspectual markers, their tense anchoring has to be achieved via a covert category. I propose in these constructions there is a functional category STATIVE (ST)\(^7\) encoded with tense features. This category is higher than the light verb EXIST. In this category St is raised to T to anchor tense. The nature of St will be left for future research.

---

\(^7\) This category cannot simply be occupied by a generic operator because stative verbs are not all generic.
3.5 Sentences with manner adverbs

Tang (2000) proposes that manner adverbs such as *qiaomiaode* ‘skillfully’ are adjoined to the AGRsP. It is lower than TP. If this category is between AGRsP and AspP in the phrase structure, and Adv has the relevant tense features, we can propose that the Adv is moved to T to anchor tense at LF. The adverb bears the relevant tense features. Note that although the issue whether AGR is present in Chinese syntactic structures is a moot point, it can be replaced by some other category. The exact nature of this category awaits further research.
(15) Tense anchoring in sentences with manner adverbs

TP
  \( \text{T'} \)
  \( \text{T} \)
  \( [S/R] \)
  \( [+T] \text{Adv} \)
  \( \text{AGR}sP \)
    Ex. Xiaoli jingjingde kan-zhe shu ‘Xiaoli studied silently.’

\( \text{manmande} \)
  \( [+T] \)
  \( \text{AGR}s \)
  \( \text{Asp}' \)
    \( \text{Asp} \)
    \( \text{VP} \)
    \( -zhe [-T] \)

3.6 yibian sentences

In yibian sentences, yibian can be regarded as an additional aspectual marker that marks simultaneity of two or more events. It has tense features that need to be checked off at LF.

(16) Tense anchoring in yibian sentences

TP
  \( \text{T'} \)
  \( \text{T} \)
  \( [S/R] \)
  \( [+T] \text{Asp}1 \)
    \( \text{Asp}1' \)
      \( \text{Asp}1 \)
      \( \text{Asp}2 \)
      \( \text{yibian} \)
        \( [+T] \)
          \( \text{Asp}2 \)
            \( \text{Asp}2' \)
              \( \text{VP} \)
              \( -zhe [-T] \)

Ex. Xiaoli zai chi fan ‘Xiaoli is eating.’
3.7 Imperative and subjunctive sentences

(17) Syntactic structure of imperative sentences

\[
\begin{array}{c}
\text{ModP} \\
\downarrow \\
\text{Mod'} \\
\downarrow \\
\text{Mod} \\
\downarrow \\
\text{VP} \\
\downarrow \\
\text{V'} \\
\downarrow \\
\text{V} \\
\downarrow \\
\text{X} \\
\end{array}
\]

\[
\begin{array}{c}
\text{na} \\
\downarrow \\
\text{zhe} \\
\end{array}
\]

\[
\begin{array}{c}
\text{hold} \\
\downarrow \\
\text{Dur} \\
\end{array}
\]

Finally let us examine the phrase structure of imperative sentences I mentioned in Chapter 2 and Chapter 3. In imperative sentences tense anchoring and aspectual construal are not necessary. The modal element overrides their occurrences.

In summary, tense anchoring and aspectual construal can be accounted for in terms of the syntax-semantics interface. From the semantic point of view, -zhe stands out from other aspectual markers in its lack of [+subjective] and [+T] feature. This semantic feature determines its movement at LF. From the syntactic point of view, the tense anchoring requirements of Chinese sentences are licensed by a local licenser bearing the [+T] feature.

4. Conclusion

In this chapter I have discussed the issue of tense anchoring in Chinese -zhe-inflected sentences and zai-inflected sentences. I explains what their tense anchoring can be achieved in terms of semantics and syntax. Generally
aspectual markers play a very important role in tense anchoring and are capable of relating events to the temporal frame. –Zhe stands out from the other aspectual markers semantically and syntactically. It usually does not acquire the present tense reading, which is blurred by some narrative context. Also, for the –zhe-inflected sentence to be complete, some elements and constructions have to contribute to the tense anchoring. In trying to answer the three questions I asked at the beginning of this chapter, I approach these behaviors from the syntax-semantics-interface perspective. I propose that the elements that make –zhe-inflected sentences complete are all elements bearing the [+T] feature, since –zhe itself does not bear this feature. I also propose elements bearing this feature must follow the syntactic principle of economy. All the movements to or from T must be local, as we have seen in the above phrase structure. The difference between –zhe and zai is account for in terms of the [±T] feature.

The contribution of this analysis is mainly theory-external. I do not argue for or against specific theories. In ferreting and sorting out all the relevant eccentric properties of –zhe I have discovered some previously unknown properties of certain expressions and constructions. In imperative sentences only phase markers are allowed, RT is not present. In locative existential sentences –zhe may combine either stative [+→ active] verbs or [+active] verbs. –zhe does not contribute to locative existential meaning or resultative state meaning, as proposed by some linguists. Its core semantic feature is [+durative]. In addition, aspectual marker is specified for [+imperative], where RT is present. The phase marker –zhe is specified for [-active], which selects only a restricted of verbs. We find that certain features are inherent in the verbs, the addition of –zhe only has an intensifying function. While in certain constructions, such as adverbial clauses, –zhe is closely related to the construction.
meaning. It seems that a more fine-grained morphosyntactic categorization of \(-\text{zhe}\), in addition to \(-\text{zhe}_A\) and \(-\text{zhe}_P\), is in order. There are also merits in putting the behaviors of \(-\text{zhe}\) at the mercy of the analytic tools of modern syntactic theories. Functional categories such as T, M, AGR, and Asp all play an important role in the syntactic and semantic construction of a sentence. The semantic feature analysis [±T] has preliminarily classified certain function categories such as certain manner adverbs, modal particle \(ne\), and aspectual markers. This tense-related feature may have consequences for non-tense elements of the language. The syntactic analysis of Asp, StP, AGRsP, and MP gives the syntactic and semantic properties a more explicit picture. They are abstract entities, but their existence must be postulated in order to uniformly account for the role time plays in human language.

In the future there are still much work to be done. The exact nature of [±T], STATIVE, Chinese AGRsP are still unknown to the linguistics. Even if they are to be replaced by some other analysis, the alternative analyses must explain the same fact they entail regarding the behaviors of \(-\text{zhe}\). The tense anchoring properties of \(-\text{le}\) and \(guo\) also requires more scrutiny. The occurrence of \(-\text{zhe}\) in middle constructions and its relation to tense anchoring also need to be account for. The grammatization of \(-\text{zhe}\) also suggests that there is perhaps a wider spectrum of the possibilities for grammaticalization of a morpheme than what the linguists have known. For example, \(-\text{zhe}\) is a aspectual marker, but it fails to bear the [±T] feature. The LF component regarding tense anchoring must also take the properties of \(-\text{zhe}\) into accout.
References


Fei, Chuan-yuan (1992). ‘Shuo ZHE.’ (About ZHE) Yuyan wenzi xue, no. 7, pp. 96-105


National Tsing Hua University.


Yeh, Meng (1993) ‘The Stative Situation and the Imperfective ZHE in Mandarin’  
_JCLTA_, 1: 69-98.