THE USE OF *LE* BY L1 CHINESE SPEAKERS AND THE ACQUISITION OF *LE* BY L2 CHINESE LEARNERS

by

CHI CHEN BREDECHE

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Gita Martohardjono

August 16, 2011
Date

Chair of Examining Committee

Gita Martohardjono

August 16, 2011
Date

Executive Officer

Gita Martohardjono

William McClure

Robert Fiengo
Supervisory Committee

THE CITY UNIVERSITY OF NEW YORK

ABSTRACT

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by

Chi-Chen Bredeche

Advisor: Professor Gita Martohardjono

The perfective marker V-*le* is claimed to be one of the most problematic items in the acquisition of L2 Chinese, perhaps because no unified and comprehensive treatment of it exists in the literature. Although much has been written on this topic, the semantic and pragmatic functions of V-*le* have remained elusive. While linguists and grammarians all agree that V-*le* performs multiple functions, there has been no consensus on its meaning and usage. Adding to this complex situation is that V-*le* is not always syntactically obligatory in Mandarin Chinese. Even though scholars are well aware of the phenomenon of "optionality" with Chinese aspect markers, disagreement and ambiguity prevail. Smith (1997) claims that V-*le*, like other aspect markers in Chinese, is always syntactically optional. Li and Thompson (1981) claim that the use of V-*le* depends largely on the speaker's viewpoint as to whether an event is "bounded" or not. Both seem to suggest global optionality. In contrast, textbooks written for Chinese L2 learners discuss V-*le* as obligatory in various different contexts.

Having found no established and unified treatment of V-*le* that reflects native

speaker's knowledge regarding its obligatory and optional use, we conducted a larger survey of 482 native speakers, 316 adolescents and 166 adults, in an attempt to capture some generalizations on the obligatory and optional use of *–le* in various contexts. Our results show a range of frequencies, from very high (98% to 100%) in the context of accomplishment predicates and activity predicates as the first event in a sequence; to high (67% to 84%) in the context of achievement predicates; to variable (31% to 64%) in the context of resultative verb complements. We argue that this pattern of V-*le* suppliance can be derived by positing a hierarchy of boundedness in the predicate and that it follows a redundancy principle in discourse.

The results from learners' data suggest that they acquired the knowledge of the perfective marking in the obligatory context after 300-400 hours of classroom instruction. They consistently used -*le* with accomplishment verbs and activity verbs as the first event in a sequence. They also consistently omitted -*le* with resultative verb complements, a hint of their implicit understanding of the semantic cues given by the predicates. In sum, the learners had a good understanding of the semantic properties of the verb class and had acquired a good, but not yet native-like, knowledge about the interaction between the perfective marker V-*le* and the lexical and semantic properties of different verb type categories.

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ACC	Accomplishment predicate
ACH	Achievement predicate
ACT	Activity predicate
BA	*ba construction* where *ba* introduces the patient in a causative sentence
CA	Chinese adults
CL	Classifier
CL2	Chinese as a second language
CONT	Control(s)
COS	Change of state
CRS	Currently relevant state
CT	Chinese teens
DO	Direct object
DUR	Durative
EXP	Experiential
FES	First event in a sequence
INC	Inception
le_1	Perfective -*le*
le_2	Sentential *le*
LE	Unified treatment towards perfective -*le* and sentential *le*
MONO-ACH	Monosyllabic achievement verb
NEG	Negation
Ø	No object
O	Object
OB	obligatory
OP	optional
OPV	Optative verbs
PFV	Perfective
PROG	Progressive
PAR	Particle
Q	Question mark
QO	Quantified object
S *le*	Sentential *le*
SO	Specified/specific object
STA	State verb/predicate
V-*le*	Perfective marker -*le*

INTRODUCTION

Research on the acquisition of tense and aspect in L2 started around the mid-1980s under the influence of early L1 acquisition studies. The focus of those studies has been on tense-aspect morphology as the surface realization of an underlying semantic system derived from an interest in the semantics of interlanguage in general, and temporal semantics in particular. These studies have included a variety of languages, including Dutch, English, French, German, Italian, Swedish, Catalan, among others, and more recently, Japanese and Chinese.

However, with a few notable exceptions, these studies have been mostly limited to the investigation of Indo-European languages. There has been little research on the acquisition of tense and aspect in non-Indo-European languages as either L1 or L2. One may wonder whether the lack of research on the acquisition of tense/aspect in these non-Indo-European languages is due to the lack of interest on the study of their tense/aspect systems. That is not the case for Mandarin Chinese, as the Chinese aspectual system is probably one of the most frequently studied topics of Chinese language in linguistic literature. How then, do we account for the gap between the research on the aspect of Chinese and research on the acquisition of aspect in L1 and L2 Chinese?

The properties of grammatical structures in Chinese, and particularly its aspectual system, have been a challenge to many theories of linguistics. According to some linguists, Chinese has two types of aspect markers. One type is a set of grammaticalized markers in the form of freestanding morphemes or particles, such as "*-le*", "*-guo*", "*-zhe*", and "*zai-*"[1],

[1] Because of its pre-verbal syntactical position, many linguists and grammarians of Chinese do not regard *zai-* as an aspect marker; it is treated as an adverb instead.

indicating either perfective or imperfective aspects. The other is a rich set of temporal adverbials such as "*gang*" (just now) and "*jiu yao*" (about to) and verbal complements such as "V-*xia qu*" (continue to V) and "V-*qi lai*" (start to V) indicating "inception", "realization" or "continuation." Since we have adopted the theoretical framework construed by Comrie (1976) and taken the subsequent linguistic research on the Chinese aspectual system into consideration (Egerod, 1994; Erbaugh, 1977, 1978, 1992; Fan, 1984; Gong 1994; Klein et al., 2000; C. Li & Thompson, 1981; P. Li, 1990; Lin, 2003; Ross, 1995; Smith, 1994, 1997, 2005; Tai, 1984; Teng, 1985; Wang, 1996, among many others), we will limit our discussion to the former type in this study. Further, we will focus our investigation on the semantic and pragmatic properties of the perfective marker -*le* and how learners of Chinese L2 acquire them. We have several reasons for choosing V-*le* as the object of our study. In spite of the efforts of numerous publications addressing its semantic and pragmatic properties, the perfective -*le* has remained a puzzle to many linguists and, consequently, no consensus on its meaning and use has yet been reached. Two issues are at the heart of this debate. One is whether V-*le* encodes "completion", "termination" or "realization" of an event. Another is in what contexts the use of V-*le* is obligatory, optional, or disallowed, and what linguistic generalization constitutes these constraints. Furthermore, there is an ongoing disagreement as to whether there are two *le*, the perfective marker V-*le* and the sentence final *le* or just one single super *LE*[2]. The proponents of the single super *LE* have argued for giving a unified semantic treatment to the perfective V-*le* and the sentence final *le* even though they are syntactically and functionally different.

[2] We use -*le* or V-*le* to represent the perfective marker *le*; *le* or S *le* to represent the sentence final *le*; and *LE* to represent the so-called "two-in-one" *le* proposed by linguists who favor a unified semantic treatment.

ISSUES WITH PREVIOUS STUDIES

Most of the previous studies on the acquisition of the Chinese aspectual system were designed to investigate learners' developmental patterns (Duff & Li, 2002; Ma, 2006; Sun, 1993; Yang et al., 1999; Zhao, 1996), the order of the emergence of the different aspect markers (Wen 1995, 1997; Teng 1999), or to test the so-called Aspect Hypothesis (Andersen & Shirai, 1996) in learners' interlanguage (Huang et al., 1998; Jin 2003). With the exception of Duff & Li (2002), none of these studies discussed the optionality of the perfective and imperfective markers, especially the optionality of V-*le*, in terms of learnability in the course of acquisition and in terms of the scoring/coding criteria associated with their studies. In addition, none specifically considered the influence of instruction as an important factor in the acquisition of L2 Chinese aspect.

The participants in these studies were invariably college students or adults. Most of them had opportunities to complete at least a semester of an immersion program in China or Taiwan in addition to their regular Mandarin Chinese classes in college. Except for the two studies reported by Wen (1995, 1997), we have not yet encountered any studies that investigate the acquisition of the Chinese aspectual system by classroom learners who live in a non-target language environment. The focus of most of the existing studies has been on the sequence of the acquisition of aspect markers, but without taking into account the learners' length of exposure to and the frequency of the different markers through the instructional process. Most troubling is that the results reported by the majority of the studies on the over-suppliance and under-suppliance of the perfective -*le* and sentential *le* by the learners of L2 Chinese were not supported with any evidence as to what constitute the obligatory contexts which require or disallow the use of V-*le* and S *le*. As a result, the

over-suppliance and under-suppliance of the aspect marker in question risk being biased by the rater's, or raters', grammaticality judgments, pragmatic preferences, and language habits.

With many primary, middle, and high schools adding Mandarin Chinese to their language programs in different countries, the number of children and adolescents learning Chinese as a second language has been increasing steadily for the last decade worldwide. Because there are unresolved theoretical issues and because only a very small number of studies on the acquisition of aspect in Chinese as a second language are available, research on the acquisition of L2 Chinese in classroom settings is necessary for teachers and researchers to more fully understand the developmental patterns of L2 Chinese learners in instructional environments.

SUMMARY OF THE STUDY

In order to address the concern of age bias in the previous studies, we chose to study classroom adolescent learners. Because perfective -*le* is the least understood aspect marker in Chinese and the most difficult one to acquire for second language learners according to the existing studies and linguistic literature (Duff & Li, 2002; Li & Thompson, 1981; Liu et al. 2006; Yip & Rimmington, 2004; Smith, 1997; Xiao, 2002; Zhao 1996, among others), we wanted to find out how adolescent classroom learners of Chinese L2 acquire the form-meaning competence between V-*le* and the perfectiveness, and how they operationalize this knowledge with its associated optionality in both spoken and written discourses.

The perfective marker V-*le* and the sentential S *le* are generally the two markers formally introduced in early stages of language instruction, usually around the beginning

of the second year for middle or high school learners. They are also the two markers which offer learners the most input and output opportunities in classroom settings[3]. Other aspect markers, except for the progressive marker *zai-*, are not only introduced much later but have a relatively low frequency of use in daily life by native speakers and classroom use by learners and teachers. As a result, classroom learners have limited input and exposure to aspect markers other than the perfective *-le* and the sentential *le*. Because of that limited exposure and since those markers are more difficult to elicit in natural production tasks, we limited our research to focus on the acquisition of the perfective *-le* and, where possible, compared that process to the acquisition of the sentential *le*.

Approach

Given the concerns discussed in the previous section, including but not limited to, age bias, language environment, research methodology, and pedagogical impact, we felt it was important to propose a different investigative approach to address these issues. First, we needed a larger survey to determine how the native speakers use V-*le* and, if possible, how they use S *le* in a discourse situation. We had to know what constitutes the obligatory and optional contexts when native speakers use the perfective *-le* and the sentential *le* before we could accurately and objectively code and rate the obligatory and optional use of both *-le* by the learners sampled in our studies. Second, we needed to administer the same task to both classroom learners (experimental group) and native speakers (control group) in order to compare their use of V-*le* and S *le*. Third, we needed to administer an additional task to both the experimental and a control group to get a more comprehensive perspective

[3] For example, one form of greetings introduced early on is “chi-fan le ma?” (eat-meal-le-Q mark: Have you eaten your meal: how are you?) The answer is either “chi-le” (eat-le: I have eaten) or “hai mei chi” (yet-not-eat: I have not yet eaten).

on how well classroom learners acquire the perfective aspect marker V-*le* and the sentential *le* in both the written and oral production.

This study had specific objectives. However, the design also had potential limitations that needed to be addressed. The general quality of instruction and the approaches used by teachers to introduce the aspectual markers are typically not under the researcher's control. Often, teachers of L2 Chinese, whether in middle and high schools or in colleges, have only a faint idea of what V–*le* and sentential –*le* mean linguistically. In the worst cases, some teachers may not understand at all the semantic and linguistic properties of these aspectual markers[4]. As a result, teaching quality is an important variable to control and has a potentially significant impact on the outcomes and the conclusions of these types of acquisitional studies[5]. In order to make sure that the learners in the study received consistent and accurate instruction in the Chinese aspectual system, which usually lasts about two to three academic years, one control strategy is for the researcher to also be the teacher in this type of investigation. That is the case in this study. When the researcher is also the teacher, the analysis and discussion of the study can be engaged from a different perspective that, potentially, may be more meaningful and explanatory. On the other hand, some researchers might argue that when the researcher is also the teacher, such studies introduce bias and perhaps, consciously or unconciously, lose their objectivity. We do not exclude this possibility, but we believe that we remained objective and impartial by applying rigorous controls on designing and conducting

[4] The observation came from my contact and communication with colleagues over the past 30 years in my profession as a teacher of L2 Chinese. In fact, I have evolved gradually from making similar errors in teaching to becoming more aware of these issues.

[5] The results of the study cannot be validated if learners were taught that the perfective –*le* in Chinese is the equivalent of English past tense, which unfortunately is all too common. Those learners would overproduce in many contexts where –*le* is not allowed grammatically, and inevitably, the researcher would use L1 transfer to account for learners' interlanguage development – incorrectly.

experiments, collecting data, coding responses and in the analysis of the results of various tasks in our study.

Lastly, though we wanted to extend our investigation to all the aspect markers, the limited period of language instruction that the learners in our study received (from 3 to 4 years, i.e. 300 to 400 hours) did not provide the opportunity to investigate their acquisition of all the aspect markers as extensively or as thoroughly as the perfective marker *–le* and the sentential *le*. As a result, we focused our attention exclusively on the acquisition of the perfective marker *–le* and its complex relationship with the sentential *le.* We did not investigate other aspect markers and their interaction with the perfective V *-le*.

Research questions

Based on the issues we detailed above, this research was designed to investigate and answer two sets of questions. The first set concerned the use of V-*le* and S *le* by the Chinese native speakers, and the second set concerned the use of V-*le* and S *le* by the adolescent classroom learners of L2 Chinese. The two sets of questions and their sub-questions were:

I. How do Chinese native speakers use V-*le* and S *le*, and specifically:
   (1) In what contexts do Chinese native speakers consistently use V-*le*?
   (2) In what contexts do Chinese native speakers consistently not use V-*le*?
   (3) What can count as optional contexts?
   (4) What are the linguistic motivations governing the use of S *le* among the native speakers of Chinese?

II. How do the adolescent learners of L2 Chinese use V-*le* and S *le* after three years of instruction in a non-target language environment, and specifically:

(1) What are L2 Chinese learners' patterns of use of V-*le* after the initial developmental stages?

(2) How do learners of L2 Chinese instantiate optionality for the use of V-*le* in written and spoken discourse?

(3) How do learners of L2 Chinese use the sentence final *le* in their discourse?

Data and the participants

For the larger survey used to determine the obligatory and disallowed contexts for both V-*le* and S *le* among the native speakers, we recruited 316 high school seniors and 213 faculty members from a high school in China. Among the 529 participants, 482 of them provided usable data that was further analyzed and discussed.

We recruited six learners of L2 Chinese who had studied Chinese for three to four years in high school in the United States as the participants of our experimental group, and six high school seniors in Nanjing as the participants of our control group, age and gender matched to the experimental group.

Both the experimental and the control group undertook two production tasks, one written and one oral. The written one was the same as the larger survey, and the oral one was a story-retelling task. We analyzed the data collected from both tasks and compared them between the natives and the learners. The results were also compared to those resulting from the larger survey of native speakers.

Organization of the dissertation

This dissertation contains an introduction and six chapters. The introduction briefly describes the limitations of the previous studies and the approach this study used, and explains who the participants were and how the data were collected. Chapter 1 lays out the linguistic accounts on the theory of aspect in general and contrasts the Chinese aspectual system against this background. Chapter 2 reviews the previous studies on the acquisition of aspect in Chinese both as L1 and as L2. Chapter 3 details the grammatical accounts on the aspectual system in Chinese with the focus on the functionality and optionality of the perfective marker -*le* and the sentence final *le*. Chapter 4 reports the design, procedure, and results of the larger survey with the 482 adult and adolescent native speakers of Chinese, followed by a detailed discussion of the constraints on obligatory and optional use of the perfective –*le* and the sentence final –*le*. Chapter 5 reports the results of the same task in Chapter 4 administered to the learners of CL2 and its control group. Chapter 6 reports and discusses the results of an oral story-retelling task administered to the same learners and control group as in Chapter 5. Chapter 7 synthesizes the findings of various tasks reported in different chapters and addresses their impact on our research questions.

CHAPTER 1

BACKGROUND

1.1 ASPECT AND ITS TWO COMPONENTS

There are two main facets of the general notion of temporality in languages. One is tense, and the other one is aspect. Tense is a grammatical category referring to the location of a situation including events and states in time. Aspect is another grammatical category referring to the internal structure of such a situation.

While tense and aspect both provide temporal information about a situation (event or state), they are two different concepts. Tense is deictic as it indicates the temporal location (or occurrence) of a situation in relation to a specific reference time. Aspect is non-deictic. It "indicates the temporal shape of a situation, and is independent of its temporal location." (Lyons, 1977:705)

The term "aspect" is used in both a narrower sense and a wider sense (Dahl, 1999:30). In the narrower sense, aspect refers to grammatical categories, which have to do with the speaker's perspective on the structure of a situation, including states and events. The classic formulation as a general definition of aspect proposed by Comrie (1976) is in this narrower sense of aspect: "Aspects are different ways of viewing the internal temporal constituency of a situation" (1976:3). In the wider sense, aspect covers lexical and semantic (notional) categories relating to the classification of situations, or a state of affairs. The narrower sense of aspect is traditionally referred to as grammatical aspect and the wider one as lexical aspect.

Aspect is a conceptual domain in linguistics reflected both lexically and grammatically. In this study, we accept Smith's two-component theory (1991, 1997) that defines aspect as an interaction between viewpoint aspect (grammatical aspect) and situation aspect (lexical aspect) as the framework for our discussion. We adopt the terms of "viewpoint aspect" and "situation aspect" for three reasons. First, the definition of grammatical aspect (Comrie, 1976; Dahl, 1999) is related to the subjective viewpoint of individual speaker. In other words, how and from which angle a situation is viewed largely depends on the individual speaker's judgment. Second, although the inherent temporal properties are encoded in verbs and other lexical items, linguists agree that aspectual meaning holds at the clause level or sentence level, rather than being embedded solely in verbs or verb phrases (Dowty, 1979; Smith, 1997; Verkuyl, 1972). Third, the terms "viewpoint aspect" and "situation aspect" have descriptive and explanatory clarity that better reflects the aspectual system in Chinese. For example, the optionality of the perfective *-le* makes it a perfect model as a viewpoint aspect marker. The termination, completion, and inception distinction of *-le* among different predicates and contexts again makes it an ideal model as a situation aspect marker.

Although Chinese is a language that does not have formal grammatical devices to encode tenses, this does not mean that Chinese is a "tense-less" language per se. Every situation in any language has to be temporally anchored in order to receive a correct interpretation by different interlocutors or readers. Languages whose expressions of temporal locations have been grammaticalized use tenses to encode locations of situations in time. However, temporal locations can also be expressed in a so-called tense-less language by periphrastic constructions (*when I went to see him, before/after I saw him*…),

temporal expressions (*yesterday, three months ago, tomorrow*), temporal adverbials[6] (*already, just now, as soon as, about to, not yet, still* …etc), modal auxiliaries (I "*want to*" see him, you "*need to*" shave, he "*must*" attend the meeting…etc), some special verbs with temporal inference (I "*suggest/ suggested*" that he…, we "*plan/planned*" to…) and sometimes with the help of discourse rules (e.g. following chronological order in narration)[7].

Despite the fact that acquisition of the Chinese aspectual system cannot be complete without understanding the target use of temporal locations in sentences and narratives, we will focus our discussion on how the situation type and the viewpoint aspect interact in the Chinese aspectual system. We have adopted Smith's model of aspect as "the semantic domain of the temporal structure of situations and their presentation" (1997:1) and consider that aspect operates independently of the tense[8] (i.e. the temporal location).

1.2 SITUATION ASPECT IN CHINESE

All languages have situation aspect. The classes of situation aspect are generally assumed to represent clusters of values for situation aspect features, specifically (i) dynamicity, (ii) telicity, and (iii) punctuality. The temporal features are universal and, in turn, describe the classes.

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[6] We distinguish temporal adverbials from other adverbials in this study. Although many researchers call temporal expressions such as "today, three months ago, in two years" temporal adverbials, we consider those entities expressing either point of time or duration to be nouns rather than adverbs. On the other hand, some adverbs such as "just now, immediately, as soon as" are closely related to the temporal location of a situation. We therefore call these types of adverbs "temporal adverbials".

[7] Tai formulated the 'Principle of Temporal Sequence' (PTS) to account for the syntactic relations in Chinese, stating that "the relative word order between two syntactic units is determined by the temporal order of the states they represent in the conceptual world" (1981: 50).

[8] Some linguists (Comrie 1976, Smith 1991, 1997, Lin 2000) point out that "the perfective *-le* combines perfective meaning and relative past time reference" (Comrie, 1976: 82, 128). However, this is not a characteristic unique to the perfective *-le*, the experiential *-guo* also has this feature. Since *-le* and *-guo* do not have the absolute tense as their built-in feature, and since we already pointed out that no utterance can be accurately interpreted without a temporal location, we will maintain our position in this study that aspect is independent of the absolute tense.

1.2.1 Vendler's verb classes

The standard classification of situation aspect follows Vendler's (1957) typology of the time schemata of verbs. Based on temporal criteria, Vendler identified four situation types for verbs:

State: static, durative (know, love Mary, be tall)

Activity: dynamic, durative, atelic (run, chat, stroll in the park, push a cart)

Accomplishment: dynamic, durative, telic, consisting of process and outcome (build a house, play a sonata, run to school, sleep for 8 hours)

Achievement: dynamic, telic, instantaneous (arrive, win a race, die, break a cup)

Linguists generally agree that the temporal and semantic features of Vendler's situation types can be described and distinguished with dynamicity, telicity and punctuality as shown below.

Table 1-1
Vendler's verb classes and their semantic characteristics

Situations	Dynamic	Telic[9]	Punctual
State	-	-	-
Activity	+	-	-
Accomplishment	+	+	-
Achievement	+	+	+

[9] Some linguists argue for the distinction between telicity and boundedness (Xiao 2006), stating that telicity indicates the spatial endpoint and the boundedness the temporal endpoint. We think that both telicity and boundedness can simply be defined as referring to events conceptualized or presented as having either spatial or temporal endpoints.

However, verb classification in Chinese has its language-specific characteristics. Tai (1984) argued for a RVC class, Li (1990) for a telic-state class, and Smith (1991, 1997) for semelfactive class. We will discuss these classes below.

1.2.2 Resultative verb compounds and accomplishment predicates

Teng (1974) attempted to divide Chinese verbs into actions, states and processes within the semantic framework of Chafe (1970), but his classification of verbs was not based on inherent temporal features such as telicity or durativity. Therefore, his classification cannot be regarded as a representative categorization of verbs in Chinese. Tai (1984) attempted to apply Vendler's categorization scheme to the classification of situation aspect of Chinese verbs. He further noted that Chinese often uses "resultative verb constructions" (RVCs[10]: also called "resultative verb complements" or "resultative verb compounds") to describe events that are specified in English with accomplishment and/or achievement verbs. Following are Tai's two examples.

(1a) John learned Chinese.

(1b) *Yuehan xue-hui Zhongwen le.*[11]

John study- know Chinese CRS [12]

[10] There are two types of RVCs in Chinese. One type is what Chinese grammar books called "Complement of Result" composed of an activity verb and an achievement verb or state verb (listen + understand, look + perceive, wash +clean, write + wrong) , and the other is "Directional Complement" or "Complex Directional Complement" . Directional complement is composed of an activity verb and an achievement indicating direction "to come" or "to go" (take + go, walk + come). The Complex Directional Complement adds a 'movement verb" between the activity verb and the achievement verb "to come" or "to go" in Directional Complement (take + up + go, walk + down + come).

[11] Because both the verbal and sentential *LE* (了) are pronounced and written the same way, we use *–le* to indicate the perfective marker which is suffixed to a verb and *le* for the particle placed at the end of a sentence. If a *LE* finds itself after a verb and at the end of a sentence (he-listen-understand), we will try to determine whether it is a *–le* or a *le* based on the context and all the given information. We will mark it as *LE* if it is truly ambiguous.

The semantic notion of the verb "to learn" is accomplishment in (1a), but is expressed in Chinese with a RVC in (1b), composed of an activity verb (study) followed by a state verb (know how to do something through learning). The last character is a sentence final *le*, which we will discuss in a later section of this chapter. Most linguists at least agree that one of the semantic functions of the sentential *le* is to encode the notion of "currently relevant situation" (CRS), a term coined by Li and Thompson (1981). Below is Tai's second example.

(2a) John found his book.

(2b) *Yuehan zhao dao ta-de* [13] *shu le.*

John - look for - arrive - his - book - CRS

The semantic notion of the verb "to find" is achievement in (2a), but is rendered in Chinese with a RVC in (2b), which is composed of an activity verb (to look for) and an achievement verb (to arrive).

The tendency of using RVCs to denote accomplishments[14] and achievements in English does not preclude the existence of "true" achievement verbs in Chinese. There are a limited number of "true" monosyllabic achievement verbs in Chinese, such as win (*ying*), lose (*shu*) die (*si*), arrive (*dao*), perceive (*jian*), drop (*diao*), explode (*zha*), extinguish (*mie*)…etc. However, contra Tai (1984), accomplishment verbs are quite common in

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[12] CRS means "Currently Relevant State", a state denoted by the sentential *le*. For a more detailed discussion, see 1.3.2.2.

[13] When we gloss the sentence in Chinese, we will focus on the relevant information pertinent to our discussion and not go into details. For example, we gloss *ta-de* as "his" rather than "he-Possessive marker" here. The same reasoning will extend to other lexical items, for example, *ditu* will be glossed as "map", not "ground-drawing".

[14] Most of the linguists (including Smith 1991 & 1997) classify the RVCs as accomplishment verbs. Xiao （2002, 2004) also classified them as achievement verbs in his corpus-based study model.

Chinese, just as they are in English and other languages. It all depends on how we interpret the notion of *accomplishment*. If we only look at the verbs, then few languages have "true" accomplishment verbs, including English. As Dowty (1979) observed, activities become accomplishments in most languages when we add a quantified direct object or a verbal complement to them[15]. Smith (1991) called this phenomenon "aspect shift". We illustrate this point with the following minimal pairs:

(3a) He used to walk every day. (Activity)

(3b) He walked to the park / three miles yesterday. (Accomplishment)

(4a) *ta meitian xie yi feng xin.* (Activity)

he - everyday - write – one – CL - letter

He writes a letter every day.

(4b) *ta zuotian xie - le yi- feng - xin* (Accomplishment)

He - yesterday- write - PFV - one - CL - letter

He wrote a letter yesterday.

(3a) and (4a) are activities, but (3b) and (4b) are accomplishments, even though both sentences in each pair have exactly the same verb and the same complement. (3b) is spatially bounded by "to the park" or "three miles" and temporally anchored to "yesterday", and (4b) is temporally located and bounded by the time expression "yesterday". It should be clear from these two minimal pairs that the situation type cannot be determined at the verb level or the predicate level, but rather at sentential level. Even though "to write a letter" is an accomplishment verb type, "everyday" would shift its situation type from

[15] Dowty (1979) said: "…In fact, I have not been able to find a single activity verb which cannot have an accomplishment sense in at least some special context…." (P. 61) He further suggested that "…Vendler's attempt to classify surface verbs once and for all as activities or accomplishments is somewhat misguided…." (P.62)

accomplishment to activity at the sentential level since the event of "writing a letter" becomes habitual, thus an activity.

Tai (1984) further indicated that (4b) does not encode accomplishment in Chinese, because it is cancelable as shown in (4c).

(4c) *ta zuotian xie - le yi feng -xin , keshi mei xie wan*

He - yesterday - write - PFV - one - CL - letter, -but -NEG - write – finish

*He wrote a letter yesterday but did not finish it.

Tai argued that even though the English version is ungrammatical, the Chinese version is not contradictory[16]. He added that in order to meet the requirements of the accomplishment situation in (4b), one should add the achievement verb finish (完*wan*) to the activity verb write (写*xie*)[17] as shown in (4d).

(4d) *ta zuuotian xie wan -le yi feng xin*

he - yesterday - write -finish - PFV -one -CL - letter

He wrote (finished writing) a letter.

Tai therefore concluded that there are no accomplishment verbs in Chinese. Tai's view and his example of "*he wrote a letter yesterday, but he did not finish writing it*" in Chinese has been widely cited in the linguistic literature of Chinese aspect. A few linguists (Teng, 1985; Li, 1990; Lin, 2005; Yang, 1995; Sybesma, 1997; Xiao, 2004) have

[16] All the native speakers of Chinese we have encountered so far judged, without exception, this sentence ungrammatical (semantically odd) and not acceptable.

[17] Again, all the native speakers of Chinese we have encountered indicated that they would simply use "*ta zuotian xie le yi feng xin*" without "*wan*" to express the idea of "he wrote a letter yesterday" in a non-stressed context.

challenged his proposal, i.e., the perfective marker -*le* does not have the universal property for encoding "completion" in an accomplishment clause, but rather a language specific property to encode "termination" in Chinese. While we don't agree with Tai's proposals on the non-existence of accomplishment verbs in Chinese and his interpretation of "termination" that a quantized accomplishment[18] predicate implies, we do agree with Tai's observation on the categorization of RVCs in that they form an important subclass in Chinese verb system and aspectual system. We, in this study, treat RVCs as achievement verbs rather than accomplishment verbs as Smith (1997) and other linguists do for two reasons. First, contra to some of the accomplishment clauses, the RVCs lack a progressive meaning and do not pass all the tests of accomplishment verbs such as "stop+", "finish +", "ambiguity with almost", "…in X time", illustrated in (5a) and (5b).

(5a) *ta zai xie yi feng xin*

he - PROG - write - one - CL - letter

He is/was writing a letter.

(5b) **ta zai xie-wan yi feng xin*

he - PROG - write-finish one - CL - letter

*He was finishing writing a letter.

Second, the focus of a RVC is not on the activity verb (always the first one), but on the achievement or state verb (always the second or the last one). The activity verbs in RVC describe the manner or the means of achieving an event, not the process and the

[18] Soh & Kuo(2001), Xiao (2004) and Lin (2004,2006) pointed out that the contradiction came out of the numeral quantized complement (one letter, two letters…). The sentence became acceptable if the complement is definite (the letter, that letter, these letters) or a bare noun (letters). Zhang (1999) and Liu (2001) advanced the same theory in their respective papers.

durativity it takes to achieve. A speaker of Chinese can choose (6a) to say that she understood something (a song in French, for example), but can also choose (6b) to say that she understood something in a certain manner (by reading the lyrics), and even choose (6c) to clarify the state or the result of her understanding in different contexts.

(6a) *wo dong -le*

I - understand - PFV

I understand (now)/I understood.

(6b) *wo kan - dong -le*

I - read- understand -PFV

I understand/understood it (by reading).

(6c) *wo kan - dong -le, keshi mei ting-dong.*

I - read- understand -PFV, but - NEG listen-understand

I understood from reading (the lyrics), not from listening (to the recording).

1.2.3 Mixed telic-stative verbs

Li Ping (1990) discussed a special lexical class of verbs and termed it "mixed telic-stative verbs" such as "*chuan*" (穿: to put on, or to wear), "*ti*" (提: to pick up or to carry with one hand) and "*na*" (拿: to take or to hold with a hand). English uses separate lexical items to express such a pair of meanings, but in Chinese, these telic-stative verbs encode either the processes of a telic situation or the state resulting from that event, depending on the aspect markers with which they are associated. When they appear without an aspect marker and are taken out of context, their meaning could be ambiguous. The following examples are construed the same way with different aspect markers.

(7a) *Yuehan zai- chuan yi jian hong chenshan*

John - PROG - wear - one - CL - red - shirt

John is putting on a red shirt. (Progressive state)

(7b) *Yuehan chuan -zhe yi jian hong chenshan*

John - wear - DUR - one - CL - red - shirt

John is wearing a red shirt. (Durative state)

(7c) *Yuehan chuan -le yi jian hong chenshan*

John - wear - PFV - one - CL - red - shirt

John is wearing a red shirt. (A result-state after having putting it on)

The Chinese verb "*chuan*" (穿) combined with the progressive marker *zai-* in (7a) corresponds to the English verb "to put on", whereas combined with the durative marker *-zhe* in (7b) or the perfective marker *-le* in (7c), "*chuan*" corresponds to the English verb " to wear", a state of having putting something on. The difference between (7b) and (7c) is that, the former focuses only on the state of "wearing"; and the latter on the change or the accomplishment from the state of non-wearing to the state of wearing. The examples of mixed telic-stative verbs in Chinese illustrate how closely the situation aspect interacts with the viewpoint aspect.

1.2.4 Four types of situation aspect in Chinese

Despite the analyses mentioned in the previous sections, we will follow Vendler's prototypical classification of four verb types in this study. Smith's semelfactives (such as knock and jump that are punctual but could be repetitive) and Li's mixed telic-stative verbs (such as put on → wear) constitute such a very small number of verbs that they do not really

affect the discussion in the subsequent chapters. The RVCs, on the other hand, not only make up a large portion of the achievement verbs and interact with the perfective *-le* actively, but also play an important role in the acquisition studies of aspect in Chinese (Li, 1990; Kong, 1993; Wen, 1995; Yang et al., 1998;Yang J., 2002). This is partly demonstrated in the theory-driven inquiries (Language Bioprogram, Basic Child Grammar, and Primacy of Aspect Hypothesis) carried out in acquisition studies that have compared the distinction of temporal features children and L2 language learners make and associate with aspect markers at the initial stages of acquisition. We therefore classified them as a sub-class of achievements instead of creating a category that would overlap with achievements.

Even though we adopted Vendler's classification of four types for Chinese verbs, it does not mean that, when interacting with viewpoint aspect, the Chinese verbs have the same semantic characteristics as the verbs of other languages. While English achievement verbs accept the imperfective marker *–ing* to denote the preliminary stages of a telic punctual event, Chinese achievement verbs accept neither the progressive marker *zai-* nor the durative marker *-zhe*. Similarly, while state verbs in English do occasionally shift to activity verb type and accept sentences such as "he is being good" or "I'm loving it" (not everyone accepts this as a correct sentence, in spite of McDonald's best efforts,) state verbs in Chinese do not shift to activity verb type and do not accept the progressive marker *zai-* at all. For example:

(11) * *Yuehan* *zai* *guai*

John PROG good

John is being good.

Only a special class of state verbs that are derived from activity verbs and mainly related to postures, the so-called "maintenance verbs" in Chinese, accept the durative marker -*zhe*, such as "stand -*zhe*" or "lying -*zhe*". In addition, a special syntactic structure, a so-called "existential sentence", allows the use of -*zhe* with state verbs derived from activity verbs. For example, "on- the wall- write -*zhe* –two-characters" means that "two characters were written on the wall". These language-specific features of the aspectual system are reflected in the intricate relationship between situation aspect and viewpoint aspect.

1.3 VIEWPOINT ASPECT IN CHINESE

Just as the Chinese language does not have overt tense markers, not all languages have overt viewpoint aspect markers. Viewpoint aspect does not have much to do with the semantic features such as dynamicity, telicity and punctuality discussed in the previous section. Instead, viewpoint aspect addresses how a particular situation or event is viewed by the language user, the speaker. Viewpoint aspect presents a situation in a certain way, making it either visible as a whole with its beginning point and endpoint, or only parts of it without reference to its beginning point and endpoint. Viewpoint aspect is generally divided into two types, the perfective aspect and the imperfective aspect (Comrie, 1976; Dahl, 1999), which will be discussed in the next two sections with respect to their application in Chinese.

Smith (1997) argued for a third type, "Neutral Viewpoint", to be added to the pool and referred to this type of sentences that lack a viewpoint morpheme as LVM sentences. According to her argument, aspectually vague sentences, i.e., sentences without a perfective or imperfective marker, should be "analyzed as having the Neutral Viewpoint".

She further argued that “Both the range of meanings that is found for aspectually vague sentences, and the theory-internal requirement of visibility, suggest that they have a viewpoint that is open but not unlimited. ” (p. 78) According to her theory, “The Neutral viewpoint is weaker than the perfective in allowing open readings. It is stronger than the imperfective because it allows closed readings.” (p. 78) She pointed out that, “ Chinese LVM sentences have similar interpretations. Viewpoint morphemes are syntactically optional in Chinese, and LVM sentences are not uncommon, especially in discourse.” (p. 97) , and gave several examples in French and in Chinese to illustrate her point. Following are her examples.

In French:

(12) Jean chantera quand Marie entrera dans le bureau

Jean will sing when Marie will enter the office

According to Smith, sentence (12) has two interpretations. The closed one is an inceptive: Jean will *start* to sing when Marie makes her entrance. On the open interpretation, Jean will already be singing when Marie enters.

In Chinese:

(13a) *Mali xie gongzuo baogao*

Mali - write - work - report

Mary writes work report.

(13b) *Ta hai zai xie ma*?

she - still - PROG - write - Q ?

Is she still writing?

(14a) *hai zai xie*

still - PROG- write

She is still writing.

(14b) **xie -le* (the * is ours)

write -PFV/CRS* (the CRS * is ours)[19]

She stopped.

(14c) *xie wan -le*

write -finish- PFV

She finished. (Smith,1997:79)

According to Smith, all the answers in (14a), (14b) and (14c) are "reasonable, showing that both open and closed readings are available" (1997:79) for (13b). The question was formulated based on the statement (13a), which does not have any overt aspect markers. The determining factors for either reading of (13a) are "situation type, context, and world knowledge" (1997:79). Let us note here Smith's description on Chinese aspectual system:

> "There are three perfectives, two imperfectives, and a neutral viewpoint. Viewpoints morphemes are syntactically optional; as a result the neutral viewpoint is in principal always available…….the choice of an explicit viewpoint morpheme [in Chinese] thus carries a certain emphasis not available in languages in which viewpoint is syntactically obligatory…"
>
> (Smith 1997:263)

[19] Since this is an erroneous sentence as a reply, we therefore treat it as an isolated sentence without contextual information, thus two interpretations are possible: (1) She wrote (the work report); and (2) she has been writing it.

Smith's position raises a few interesting questions, but before discussing them, we need to make a comment on (14b). Probably due to the distinction, based on the argument advanced by Tai (1984) between "termination" and "completion" of accomplishment sentences in Chinese we discussed above, the perfective marker *-le* in Smith's discussion acquired another undue status—from encoding "termination" in accomplishment sentences to encoding termination in all types of sentences. Unfortunately, without the native speaker's linguistic and pragmatic competence, many non-Chinese native linguists have formed incorrect assumptions and given erroneous examples based on Tai's "termination" theory in accomplishment sentences in Chinese. Any native speaker of Chinese would tell us that (14b) cannot be one of the answers for (13b). If there are no contextual cues, (14b) "*xie -le*" simply means "she wrote it" (if *-le* is understood as a perfective marker) or "she has begun writing it" (if *-le* is understood as a sentential *le* marker), which in either case is not an appropriate answer for "Is she still writing it?"

A native speaker of Chinese (or an advanced learner of Chinese having received competent and clear instruction on aspectual markers) would know that there is only one way to say "she stopped (writing the work report)" in Chinese, that is, using a negative marker *bu* in front of the verb *xie* (写 to write) and a sentential *-le* to signal the change of situation from "writing" to "non-writing", as shown in (14b'):

(14b') *bu xie -le*

not - write -CRS

she stopped (writing) → not (in the state of) writing anymore

One may wonder why *-le* in (14b') is not a perfective marker, but rather a sentential marker. One of the obvious reasons is that the sentence "*bu xie le*" is not bounded. The Chinese use

two negative markers *bu-* and *mei-* to negate a statement, the former is used to negate semantically unbounded sentences and the latter semantically bounded sentences.

This brings us to Smith's argument on "Neutral Viewpoint". Whether the neutral viewpoint is empirically and theoretically sound is beyond the scope of this work. One may argue against the neutral viewpoint position by simply saying that it violates Gricean Maxims and Cooperative Principles (maxims of quantity, relevance, and manner). For example, what kind of contribution does the sentence "*Mali-xie-gongzuo-baogao"* (Mary-write-work report) make in a conversation without additional information? What we are interested in here, assuming neutral viewpoint is theory-driven, is whether the neutral viewpoint is the optionality exhibited by the Chinese markers, especially the perfective marker *-le*, or are they two different concepts?

We do not deny or neglect the fact that the aspect markers (especially the verbal *-le* and the sentential *-le*) can be optional in Chinese. In fact, this study was designed to investigate the obligatory and the optional use of the perfective marker *-le* and the sentential *-le* among the Chinese natives and Chinese L2 learners. Since the use of aspect markers is more pragmatic and semantic driven than a syntactic or morphological requirement, we are not interested in isolated sentences without contextual support. Instead, we are interested in how the Chinese use aspect markers and the sentential *-le* in discourse.

There are mainly three reasons for a native speaker of Chinese not to use an aspect marker such as the perfective marker *-le* in a discourse. The first reason is that the speaker judges the event in question to be unbounded, so there is no need to use V-*le*. The second is that the speaker judges that there is enough semantic and temporal information in the

discourse to indicate the event is bounded, such as the use of a resultative verb compound (write-finish, listen-understand, wash-clean…etc.), and/or time adverbials (yesterday, last year…etc), so the use of V-*le* becomes redundant. The third is when the speaker chooses to use a special construct to stress the sequence of the event, such as "*yi-*V_1*-jiu-*V_2 " (as soon asV_1, then V_2), or to highlight certain information in focus, such as "… *shi…V-de*" (it was [temporal expressions, manners, etc.]…that …). In these cases, the speaker does not intentionally give the conversation partner the choice to interpret his utterance as either perfective or imperfective. If a speaker drops *V-le* in a perfective context, it is probably because she is using an achievement predicate, RVC, activity verb with a past temporal adverbial, or a special syntactic construct with a focus or emphasis and judges the contextual information is sufficient enough to convey what she intends.

Viewed from this perspective, it seems to us that Smith's Neutral Viewpoint and optionality are two different concepts. We will assume this position for this study. We assume, following the above analysis, that Chinese has two viewpoints: the perfective viewpoint and the imperfective viewpoint. We also assume that, when an aspect marker becomes syntactically optional, it maintains, semantically, its aspectuality.

Lastly, even though "…there is about as little agreement on the semantic essence of the perfective/imperfective distinction as on the nature of aspect in general…" (Dahl, 1999:33), we follow Comrie's tradition and define the viewpoint types as follows. Perfective viewpoints focus on a situation in its entirety, including both initial and final endpoints. Imperfective viewpoints focus on part of a situation, including neither initial nor final endpoints.

Although our study focuses on the perfective marker -*le* and the sentential -*le*, in order to provide a comprehensive overview, we will discuss the fully grammaticalized aspect markers in Mandarin Chinese in the next two sections. They are the perfective -*le*, experiential -*guo*, progressive *zai*-, and durative -*zhe*. We will also discuss the much debated sentential -*le* as there is no consensus in the current literature on whether the sentential -*le* and the perfective -*le* should have a unified treatment, or whether the sentential -*le* should be treated as an aspectual marker or a discourse marker.

1.3.1 The Imperfective Viewpoints

Imperfective viewpoints present a situation from an internal vantage point that excludes the initial and the final points of a situation. Chinese has two such imperfective viewpoint markers: *zai*- and -*zhe*. Zai- is a typical progressive marker; -*zhe* has a static meaning that is idiosyncratic to the Chinese language. Both *zai*- and -*zhe* focus on intervals. *Zai*- focuses on the dynamic stage of non-stative situations, while -*zhe* has a static, stative focus. Though distinct from each other, there is some semantic and pragmatic overlap between the two viewpoints. There is also a dialectal-geographic variation on the usage of these two viewpoints. While Northern Chinese tend to use -*zhe* more often than *zai*-, the southerners prefer to use *zai*-. Finally, there is a written and narrative difference between these two markers. -*Zhe* tends to appear more often in written texts than *zai*-.

1.3.1.1 Progressive *zai*-

Dahl (1999) pointed out, "… the overwhelming majority of progressive constructions in the world's languages is periphrastic and originates in various types of phraseological constructions, often with an original spatial meaning, such as 'be at doing

something.'…" (1999: 32). The Chinese progressive *zai*- also evolved along this line. It has its origin as an existential verb, then evolved into a locative marker, and now has become a progressive marker. It still retains its existential and locative meanings as a verb, co-verb or preposition in modern Chinese.

Unlike verbal *-le*, experiential *-guo*, and durative *-zhe* that are placed right after a verb, progressive *zai*- precedes verbs. *Zai*- presents an internal interval of duration and often has the connotation of activity [+ dynamic] associated with events. Consequently, unlike English, states [-dynamic] and achievements [+ punctual] combined with *zai*- are ungrammatical in Chinese. The following are the possible and impossible interactions between *zai*- and different situation types in Chinese.

I. Ungrammatical with individual and stage level state verbs, and achievement verbs:

(15) **Yuehan zai congming.*

John - PROG - smart

John is/was being smart.

(16) **Yuehan zai ying*

John - PROG - win

John is winning.

Unlike English, "smart" and other stative verbs such as "happy" and "good" cannot take the 'stage-level' interpretation in Chinese. They are always understood by the Chinese as individual level state verbs. Further, Chinese achievement verbs cannot combine with progressive markers to denote the preliminary stage that leads to the final attainment. In order to express the idea of "John is winning", the Chinese would say "It

seems that John wins" or "John is about to win". The same reasoning can be extended to other achievement verbs for the same context.

II. Gramatical and compatible with activity verbs, accomplishment verbs and mixed telic-stative verbs (a subclass of accomplishment verbs):

(17) *Yuehan zai chang ge*
John - PROG - sing song(s)
John is/was singing.

(18) *Yuehan zai chang yi shou zhongguo ge*
John - PROG - sing - one -CL - Chinese - song
John is/was singing a Chinese song.

(19) *Yuehan zai chuan dayi*
John PROG put-on coat
John is/was putting on a coat.

The prototypical activity and accomplishment situations in Chinese function about the same way as they do in English. On the other hand, *chuan* in (19) belongs to a special class of verbs (classified by Li 1990 as mixed telic-stative verbs) that has dual functions depending on its association with different aspect markers as discussed in 1.2.3. Since progressive *zai*- requires a [+dynamic] interpretation, *chuan* is interpreted in (19) as the accomplishment of "putting-on" but not the state of "wearing" something.

1.3.1.2 Durative –*zhe*

Durative -*zhe* presents a continuous and stable situation without regard to the starting point and the endpoint. -*Zhe* encodes resultative stative situations, focusing at the

basic level on state of position, postures, and other states that result from an event as discussed in 1.2.3, and 1.2.4.

-*Zhe* has its origin as a main verb that means "to arrive at a target place and as a result stays attached to it" (Wang 1958). Through the grammaticalization, -*zhe* still maintains the two basic aspects to its meaning as a durative marker: location (similar to *zai*-) and attachment. These two aspects give -*zhe* its language-specific idiosyncrasy that is not found in English.

The "location" connotation explains the occurrence of -*zhe* in existential constructions with verbs related to positions such as *fang* (to put), *gua* (to hang) and *zhuang* (to load). The following is how –*zhe* interacts with telic-stative verb denoting a "location" connotation:

(20) *zhuo shang fang zhe yi ping hua*
table - on - put - DUR - one - CL - flower
There stands a vase of flowers on the table.

The state of "standing" on the table denoted by the vase in (20) is the result of it having been put there by someone. The focus of the statement is what can be seen on the table (a durative situation), not what someone has done with the vase of flowers (an accomplishment), hence the choice of using the aspect marker -*zhe* with the existential construction.

The "attachment" connotation gives -*zhe* its function of backgrounding a situation. A situation presented by -*zhe* serves to describe the background activity to a more dynamic and dominant event. The interaction of states and -*zhe* depends on the semantic features of the predicates that express the states. -*Zhe* also tends to appear with stage-level predicates

because these describe situations that are prone to change, such as “being busy” or “being sick”. The example of *–zhe* with a stage-level state predicate showing an “attachment” connotation is shown in (21):

(21) *Yuehan mang zhe zuocai*
John - being-busy - DUR - cook
John is/was busy cooking.

However, *-zhe* cannot combine with an individual-level state verb, as shown in (22):

(22) **Yuehan congming -zhe*
John - being smart - DUR
John is being smart.

It is common to see *-zhe* combining with state/maintenance verbs denoting postures whether as a state as shown in (23a) or as a background verb in (23b):

(23a) *Yuehan zhan -zhe*
John - stand - DUR
John is/was standing.

(23b) *Yuehan zhan -zhe kan shu*
John - stand - DUR - read - book(s)
John reads while standing.

The Chinese also use *-zhe* with activity verbs as a background verb provided there is a main verb in the sentence functioning as the foreground verb, as in (24):

(24) *Yuehan kan -zhe shu chifan*

John - look - DUR - book - eat

John eats/ate while reading.

According to Hopper (1979), narrative discourse has two parts: the foreground and the background. The foreground relates events belonging to the skeletal structure of the discourse and consists of clauses that move time forward. The background does not itself narrate main events but provides supportive material that elaborates on, evaluates or explains the events in the foreground. While the sentence "?*Yuehan kan -zhe shu*" (John is reading) sounds odd because the activity verb is inherently dynamic and therefore semantically incompatible with the non-dynamic feature of the durative marker *-zhe*, it is semantically coherent to use an activity verb with *–zhe* to describe the background of an event such as (24).

-Zhe does not combine with accomplishment verbs [+telic] and achievement verbs [+ telic, + punctual], but combines with mixed telic-stative verbs, such as *chuan* (穿 to put on→to wear) and *na* (拿 to take→ to hold), as shown in (25):

(25) *Yuehan chuan -zhe dayi*

John - wear - DUR - coat

John is/was wearing a coat.

Notice that (19) and (25) are two identical sentences with different aspect markers. Contra to (19) *Yuehan zai- chuan dayi* (John is/was putting his coat on) which is a dynamic activity, (25) shows the state of John's wearing a coat which in turn is the result of having put it on (an accomplishment).

1.3.2 The perfective viewpoints

Perfectivity does not necessarily entail short duration, punctuality, or the result of a situation (Comrie, 1976:16-20). On the other hand, "a perfective form often indicates the completion of a situation when it is explicitly contrasted with the imperfective form: since the imperfective indicates a situation in progress, and since the perfective indicates a situation which has an end, the only new semantic element introduced by the perfectivity is that of the termination of a situation…" (Comrie, 1976:19). Perfective viewpoints present a situation in its entirety that includes the beginning and the end. According to Comrie (1976), "in many languages that have a distinction between perfective and imperfective, the perfective forms of some verbs, in particular of some stative verbs, can in fact be used to indicate the beginning of a situation (ingressive meaning)." (1976:19). Chinese is one of these languages Comrie discussed. There are two perfective markers in Chinese, *-guo* and *-le*. Some accomplishment verbs and many achievement and state verbs often encode both perfectivity and the inchoativity of a new situation when combined with *–le*. The state of John's "wearing a red shirt" as shown in (7c) is the result from an accomplishment of "having put it on". If we are telling someone that John went to China yesterday "*Yuehan-zuotian-qu -le-zhonggjuo*" (John-yesterday-go-*le*-China), the achievement verb in the statement encodes two kinds of situation: (1) perfectivity: John left here (achievement); and (2) inchoativity or a change-of-state (COS): the result of John's leaving here and the beginning of the state of John's being in China. When state verbs combined with *-le*, the statement does not encode termination or completion, but the inception of a new state. For example, the statement "*ta gao -le*"(he-tall-*le*), which includes the state verb "*gao*: to be tall" and the perfective marker *-le*, means that "he became/has become tall".

However, we distinguish this type of inchoativity or change-of-state from one denoted by the sentential *le*, such as “it is raining now!” (*xia-yu le*[down-rain-*le*]) or “they have begun the meeting” (*tamen- kai-hui le* [they-open-meeting-*le*]). The inchoativity or change-of-state denoted by the perfective marker -*le* is initiated by the endpoint of an event, but the inchoativity or change-of-state denoted by the sentential *le* is the beginning of an event by itself. We will discuss these two *le* more in detail in 1.3.2.2.

1.3.2.1 Experiential -*guo*

-*Guo* is generally considered as an “experiential” marker, which simply means “having the experience of doing something at least once”. It can be applied to most types of situation aspect, except for state verbs with individual level predicates such as “belong to” and “to be”. For example:

(26a) **Yuehan shi -guo Meiguo-ren*

John be EXP American

John has/had been American (once).

(26a) is interpretable only under special circumstances, such as John once had the American nationality but no longer has it, or John was born American but gave up his nationality. In any case, this sentence is still ungrammatical in Chinese. A native speaker would simply use the temporal adverbial *congqian* (从前 before, some other time ago) to express such an idea as shown in (26b):

(26b) *Yuehan congqian shi meiguo-ren*

John - before - be - American.

John has/had been American (once).

Individual-level state verbs are incompatible with *-guo* due to their semantic features. States will not change of themselves. States are expected to hold without the intervention of the external force. However, *-guo* by its definition of "having the experience of" denotes a discontinuity that necessarily implies that the state ceases to hold. The minimal pair (27a) and (27b) below further illustrates this requirement of a discontinuity with the present, or in relation to the speech or reference time.

(27a) *Yuehan qu -guo Meiguo*

John - go - EXP - USA

John has been to America.

(27b) *Yuehan qu -le Meiguo*

John - go - PFV - USA

John went to/left for America.

(27a) indicates that John has the experience of going to US before the reference/speech time, although this does not exclude the possibility of his being in the US now on another visit. (27b) specifies that John is either in the US or on his way to the US at the speech/reference time.

Apart from requiring the discontinuity with the reference or speech time, *-guo* as being an "experiential" marker also requires that the action with which it associates be repeatable (Iljic, 1990) such as the case in (27a). This explains why (28) sounds anomalous except in special contexts.

(28) **Yuehan si -guo*

John - die - EXP

John has died [at least once].

1.3.1.2 Perfective -*le*: How many *le*? One or two?

Any meaningful discussion of perfective -*le* cannot avoid the decade-old "one-super-*LE* versus two-*le*" debate. Not only does this debate have theoretical implications, but it also has tremendous impact on the study of the acquisition of perfective aspect in L1 and L2 Chinese. The fact that there has not been agreement on whether Chinese children or Chinese L2 learners acquire inchoative first, perfective first, or both at the same time mainly stems from the lack of agreement on the theories of one super *LE* versus two *le*.

There are two opinions regarding the particle *le* in Chinese. One opinion holds that there are two particles, homophonous but having different syntactic distributions and semantic functions (Chao, 1968; Comrie, 1976; Li & Thompson, 1981; Lü, 1980; Sybesma, 1997; Smith, 1991; Sun, 2002; Teng, 1999; Yang, 1998; Zhu 1982, among others). In this treatment, verbal -*le* glosses the particle that follows the verbs and typically has the perfective meaning. The sentential *le* glosses the other particle that only appears at the end of the sentences and is usually associated with meanings such as change-of-state or inchoativity under the notion of Currently Relevant Situation (CRS, Li & Thompson, 1981).

The other position holds that, despite the difference in their syntactic distribution, the two homophones are closely related to each other, sharing the meaning of "contrast to previous state" semantically, and therefore can be treated as the same morpheme on semantic terms (Li, 1990; Spanos, 1978; Rohsenow, 1976; Yang J., 2002; among others). Li (1990) further explained, " ...whether this new state comes about at the end or at the beginning of a situation is not conveyed in the aspectual meaning of *LE*, instead it is

determined by the kind of verb with which *LE* occurs"[20] (p.21). However, Li's position on the unified treatment of *LE* was not mentioned in Li & Shirai (2000).

While the claim for unified treatment of *LE* is attractive, there are some issues that we have to take into consideration: (I) historical background of verbal -*le* and sentential *le*; (II) the two "*le*" distinction in other Chinese dialects; (III) the use of sentential *le* by young Chinese children; and (IV) the "inchoative" and "perfect" meaning denoted by sentential *le* that is not conveyed by verbal -*le*. We will elaborate more on these four issues below.

(I) Historical background

Linguists generally agree that, before going through the full grammaticalization, the verbal -*le* (了) was and still is a full verb pronounced *liao* (了) meaning "to complete, to finish, to end". Chao (1968) theorizes that the origin of the sentential *le* is the verb *lai* (to come, 来) that underwent schwa reduction during its grammaticalization. This assumption has its root in colloquial Chinese, where the sentence final particle *lai-zhe* still functions as a marker signaling the "current relevant situation". For example:

(29) *Yuehan chi fan lai-zhe*

John - eat - meal - PAR

John is eating/ John is going to eat/John started to eat

(II) Two "le" distinction in dialects

While a sentence such as "I –eat –*le* (PFV) *le* (CRS)" does not usually exist in the speech of adult Chinese due to phonological constraint, linguists have reported that in other

[20] We discussed the inchoativity the perfective -*le* could imply with accomplishment and achievement events in 1.3.2., but we maintain the distinction between the result→inchoativity of a new state (V –*le*) and the beginning of a new event or a state (S *le*) in this study.

Chinese dialects, especially the southern dialects, there are two distinctive *le*, and that they often appear together, one after the verb and the other one at the end of the sentence.

in Hokka:	John eat -*jiao*	(PFV)	*lo* (CRS)
in Cantonese:	John eat -*jo*	(PFV)	*la* (CRS)
in Shanghainese:	John eat -*zi*	(PFV)	*lai* (CRS)

It is also reported (Kwan-Terry, 1979; Bao, 2005) that in Singapore where English and Mandarin Chinese are two mainstream languages, the Hokkien or Cantonese Singaporeans often utter sentences like (29)[21], where PFV-*le* is pronounced *liao* as the verb " to complete; to end" mentioned in (I):

(29) *Yuehan chi liao le*

John - eat - PFV - CRS

John has eaten/John ate/John finished eating.

(III) Sentential le in L1 acquisition

Erbaugh (1985) reported that young and not so young Chinese children often double mark their sentences with V-*le* and S *le*. Besides, very young Chinese children use *le* frequently in its inchoative meaning (currently relevant situations) without any verbs (Erbaugh, 1985). For example, a child *Laohu* (2:0) in Erbaugh's study announced that he had become a robot:

(30) *wo jiqi- ren le*

I - robot - CRS

I have become a robot/I am a robot now.

[21] We had the opportunity to confirm this report by having lived in Singapore for an extended period.

Erbaugh (1985) also mentioned that all four children in her longitudinal study described the event of having pulled apart Lego blocks as “two - (lego) *le*”.

(IV) Different aspectual meaning

It is not easy to explain under the unified treatment why the same particle *le* has two different functions and two different scopes. Furthermore, if the two *le* are semantically similar, why do we find sentences in everyday conversations that have both V-*le* and S *le* as in (31c)?

(31a) *Yuehan chi -le san wan fan*

John - eat - PFV - three - CL - rice

John ate three bowls of rice (and he is/was no longer eating).

(31b) *Yuehan chi wufan le*

John - eat - lunch CRS

John ate/ John is eating/ John is going to eat/ John has been eating -- his lunch

(31c) *Yuehan chi -le san wan fan le*

John - eat - PFV - three - CL - rice - CRS

John has eaten three bowls of rice (and he might continue eating his 4th bowl)

Notice that the inchoative meaning denoted by CRS *le* in (31b) and (31c) is not and cannot be conveyed by PFV-*le* in (30a). The function of sentential *le* in Chinese is similar to that of a perfect in English as it comments on the “current relevancy” which relates situations to a reference time (Reichenbach, 1947, cited in Dowty, 1979).

Dowty (1979) pointed out, after evaluating Jespersen and Reichenbach’s “current relevance theory” that the perfect has as part of its meaning (as part of its conventional

implicature) a very general notion of “current relevance”. That is, the event described has some relevance to the present context, the nature of which is to be inferred entirely from contextual factors. Since “current relevancy” is such a vague and contextual-dependent notion, the other way to look at perfect is its *extended now* meaning and function. The perfect serves to locate an event within a period of time that began in the past and extends up to the present moment (or the speech time or reference time). The perfective, on the other hand, specifies that an event occurred in its entirety without any reference to the temporal location (even though by default the perfective usually occurred in the past), including the present time or speech time.

Based on all the considerations discussed above, we will join the “two *le*” camp and consider verbal *-le* as a perfective marker and sentential *le* as a perfect marker or a discourse marker with its connotation of “current relevancy” (in the absence of a better and more concrete terminology for the notion of “extended now”).

CHAPTER 2

GRAMMATICAL ACCOUNTS OF V-*le* AND S *le*

We mentioned previously that aspect is probably one of the most studied topics in Chinese linguistic theory, contrary to the rarity of its acquisitional counterpart. A number of grammar books have also devoted a good portion of their content to the discussion and explanation of V-*le* and S *le*. Since there has been no consensus on the linguistic theory of V-*le* and S *le*, the grammatical accounts of V-*le* and S *le* differ from book to book and are sometimes contradictory to each other. As a result, there is a significant gap between theoretical grammar and pedagogical grammar concerning the two -*le*. Few Mandarin Chinese textbooks have a progressive, comprehensive linguistically and pedagogically sound explanations and rules about V-*le* and S *le*, probably due to their semantic complexity and the pragmatic diversity. What are generally lacking in the textbooks are the examples that serve as negative evidence that we will discuss in the following sections.

The most comprehensive grammatical accounts of V-*le* and S *le* can be found in Li and Thompson's *Mandarin Chinese* (1981) which also serve as reference for many linguists and teachers of Chinese. Chao (1968) and Lü (1980) gave a concise but very clear account of V-*le* and S *le* in their reference books *A Grammar of Spoken Chinese* and *The 800 Words of Contemporary Mandarin Chinese* respectively. T'ung and Pollard's (1982) *Colloquial Chinese* is probably one of the few textbooks that provide examples of disallowed V-*le* sentences as negative evidence with some degree of explanation. Ross (2004) also provided useful examples and discussed the use of V-*le* and S *le* in her *Chinese Grammar* aimed at the beginning level learners of Chinese. Yip and Rimmington (2006)

provided a good and often insightful discussion on V-*le*, and in particular on S *le*, in their *Chinese: A Comprehensive Grammar*. Finally, Liu et al. (2006) gave some detailed accounts on V-*le* and S *le* in their *Practical Grammar of Contemporary Mandarin Chinese*.

Since the perfective -*le* and sentential *le* are the focus of our study, and since *Mandarin Chinese* is probably the most cited reference on the discussion of both -*le*, we will give a summary of the grammatical accounts of V-*le* and S *le* based on Li and Thompson (1981) and incorporate other authors' views such as those of Lü (1980) and Yip & Rimmington (2006) as well as our comments in the discussion. We will also come back to examine their proposals when we discuss the results of our survey and experimental studies in the subsequent chapters. We discussed the two different views on the treatment of V-*le* and S *le* in Chapter 1 and explained our reasons for opting to join the two-*le* camp. The grammatical accounts we will summarize and comment on are all from those of two-*le* proponents which include Lü (1980), Li and Thompson (1981), T'ung and Pollard (1982) and Yip and Rimmington (2006).

2.1 Grammatical accounts of the perfective -*le*

Li and Thompson continued Comrie's tradition and defined the perfective -*le* as a grammatical device denoting an event being viewed in its entirety or as a whole. They introduced the term "boundedness" to describe the notion of perfectivity. According to them, only when an event "is *bounded* temporally, spatially, or conceptually" can we say that it is being viewed in its entirety. They further emphasized that "Any description of the verbal aspect marker -*le* must begin with the caveat that it is important to keep the perfective aspect distinct from the sentential-final particle *le*." (1981:185). Nevertheless, sometimes we cannot avoid mentioning sentential *le* while discussing the verb -*le*, as these

two *le*, difficult to distinguish in their syntactic position and sometimes in their pragmatic function, are semantically related.

2.1.1 Contexts where V-*le* is used: a bounded event

According to Li and Thompson, there are essentially four ways in which an event can be viewed as bounded: by being a quantified event, by being a definite or specific event, by being inherently bounded because of the meaning of the verb, or by being the first event in a sequence (pp. 185-186). We will discuss each category below.

(A) By being a quantified event

A verb will typically occur with -*le* if the event signaled by the verb is bounded by overt phrases naming the specific quantity of the direct object, the extent to which that event occurred, the amount of time it took, or the number of times it happened. Sometimes the quantified event is a state whose limits are set by a phrase expressing the extent to which the subject is in that state. However, the decision of whether or not to use -*le* depends on each speaker's "judgment about how much a quantified direct object serves to bound an event" (p.191). The following examples illustrate the "boundedness" expressed by these underlined overt phrases in each situation:

(32) *Yuehan he - le* <u>*san bei cha*</u>

John - drink - PFV - three - CL - tea

John drank three cups of tea.

(33) Y*uehan zou - le* <u>*san gongli*</u>

John - walk - PFV - three - kilometer

John walked for three kilometers.

(34a) Y*uehan zou - le* *san ge xiaoshi*

John - walk - PFV - three - CL - hour

John walked for three hours.

(34b) Y*uehan zoulu zou - le* *san ge xiaoshi*

John - walking -walk - PFV - three - CL - hour

John walked for three hours.

(35) Y*uehan zou - le* *san ci*

John - walk - PFV - three - times

John walked three times.

(36a) Y*uehan pang - le* *san gongjin*

John - fat - PFV - three - kilogram

John gained three kilograms (≈ John has gotten fatter of three kilograms).

(36b) Y*uehan pang - le* *san gongjin*

John - fat - PFV - three - kilogram

John is three kilogram too heavy (than the requirements).

(34a) and (34b) describe the same event of John's walking for three hours with different syntactic structures. Many intransitive verbs in English have their Chinese counterpart as transitive verbs, and "to walk" is one of them. We will discuss this category of verbs more in detail in the next section 2.1.2. For the time being, we will turn our attention to the contrast of the "unboundedness" and "boundedness" illustrated in (34b). (34b) represents one of the topic-comment type sentences in Chinese. The first mention of

zoulu "to walk on the road" introduces the topic/event of walking as an unbounded activity and therefore cannot take -*le,* and the second mention of *zou* "to walk" is bounded by the phrase *san ge xiaoshi* "three hours", and the verb -*le* is required. Together the phrase *zou -le san-ge xiaoshi* "walked for three hours" comments/explains the amount the time this walking event took. (36a) and (36b) are two identical sentences, but they can be interpreted differently in different contexts. (36a) can be uttered if we compare John's weight to that of two months ago, and (36b) can be said if John wanted to join the gymnastic team and was judged too heavy to be qualified as a team member. There is always a danger of misinterpreting an isolated sentence without other contextual information, but it is particularly true when it comes to interpreting sentences with V-*le* and S-*le*. That is why we are proponents of using discourse, rather sentences, as a tool to measure the use of aspect markers by both native speakers and learners.

Situations expressed with quantified phrases typically occur in the past so that it is semantically coherent. However, future time expressions or temporal adverbs can be added to the above sentences for special contextual requirements. For example, (36a) can be turned into (36c):

(36c) Y*ueha pang -le* <u>*san gongjin*</u> *yihou* <u>*jiu buyong chi yao le*</u>

John - fat - PFV- thre –kilo -after- then- -not- need-eat -medication-CRS

John may stop taking the medication after he gains three kilograms.

(B) By being a definite or specific event

An event is bounded if the direct object is understood as a definite noun phrase. Just like the case for the use of -*le* with quantified events, the decision of whether or not to use -*le* with a definite or specific event largely depends on individual speaker's point of

view on the extent to which the event is judged to be bounded. Some typical examples of definite or specific events with the use of *-le* are illustrated below:

(37) *ta xie -le na feng xin*

he - write - PFV- that - CL – letter

He wrote that letter.

(38) *wo xi -le ni-de yifu*

I - wash - PFV - your - clothing

I washed your clothes.

Zhang (1999) raised an interesting question on the aspectual and discourse properties of definite and indefinite NPs. While virtually everyone agrees with the theory that an indefinite object NP may contribute to the boundedness of an event, as shown in examples (32) - (36), Zhang questioned whether definite NPs are able to make the same contribution as Li and Thompson claimed. His conclusion was that the indefinite NPs and definite NPs have different aspectual and discourse properties. The indefinite NPs, as those quantified direct objects in (32)-(36), imply total affectedness and therefore are usually “event-dependent”. The definite NPs do not imply affectedness and as a result are usually “event-independent”. While (37) and (38) are grammatical sentences, the Chinese tend to use topic-comment construction to express events with definite or specific objects, as shown in (37a) and (38a):

(37a) *na feng xin ta xie -le*

that - CL- letter - he - write - PFV

He wrote that letter.

(38a) *ni-de yifu wo xi -le*

your - clothing - I - wash - PFV

I washed your clothes.

As a general rule for discourse (Yip et al. 2004, Liu et al. 2006), all unmarked nouns in a Chinese narrative sentence in a pre-verbal position take on a definite reference, and all unmarked nouns positioned post-verbally are liable to be of indefinite reference. When this rule and the topic-comment construction combined, we can assume that the Chinese tend to place definite object NPs pre-verbally and the indefinite NPs post-verbally. In fact, sentences become ungrammatical if the indefinite NPs with quantification expression are placed pre-verbally because they violate the rule of "topic-comment" where the topic to be explained or commented on must be a known entity to the speaker and the hearer, as shown in (37b) and (38b):

(37a) **yi feng xin ta xie -le*

One - CL- letter - he - write - PFV

He wrote that letter.

(38a) **yixie yifu wo xi -le*

some - clothing - I - wash - PFV

I washed your clothes.

This ungrammaticality is also probably due to what Zhang called "total affectedness", the aspectual property implied by indefinite NPs, which requires them to be syntactically placed post-verbally. We can also use Zhang's "un-affectedness" theory about the definite NPs to explain why some linguists (including Li & Thompson, Smith,

Tai, among others) claim that an accomplishment situation containing V-*le*-O does not encode completion, but termination. We do not agree with their position and suggest that their claim should be modified as follows:

(i) When an accomplishment predicate has a *quantified* direct object (i.e. indefinite NPs), the object is necessarily "totally affected" by the activity verb, and the event can only be viewed as "completed";

(ii) When an accomplishment predicate has a *specific* or *definite* direct object, the object may be either "totally affected" or "partially affected" by the activity verb, therefore the event can be viewed either as "completed" if it is the former case, or as "terminated" if it is the latter case.

(C) By being inherently bounded because of the meaning of the verb

Some verbs represent specific, bounded events by virtue of their meaning, such as achievement verbs "to die", "to forget", "to arrive", "to perceive", "to break" …etc, which have endpoints built into their meanings. Achievement verbs are a universal semantic class, but their interaction with certain aspect markers is language specific. Unlike English and other languages where "is arriving" or "is leaving" denote the preliminary stage of the punctual endpoint, the achievement verbs (including its subclass RVCs) in Chinese can only interact with the perfective marker -*le*, as discussed in 1.3.1 and 1.3.2., and as shown in (39) and (40):

(39) *Yuehan qunian* <u>*si*</u> *- le*

John - last year - die -PFV

John died last year.

(40) *Yuehan* *wang* *- le* *wo* *shi* *shei*

John forget PFV I am who

John forgot who I am.

Both *si* "to die" in (39) and *wang* "to forget" in (40) are monosyllabic "true" achievement verbs that have the endpoint built in. Not only can *-le* be used because these verbs encode boundedness, *-le* must be used for prosodic reasons[22]. If we replace *si* and *wang* with *si-diao* "to die +lose" and *wang-ji* "to forget +remember" respectively, then *-le* can become optional in a discourse. Example (41) with a RVC further illustrates this point:

(41) *wo* *zuotian* *pengjian* (*-le*) *san* *ge* *lao* *pengyou*

I - yesterday- bump into - (PFV) - three - CL - old friend

I bumped into three old friends yesterday.

The perfective marker *-le* is optional in (41), not because whether individual speaker views the situation as bounded (therefore with *-le*) or unbounded (therefore without *-le*), but rather due to whether each speaker judges the use of *-le* is redundant or not after *pengjian* (bump + perceive), in which *jian* (to perceive) not only adds an endpoint to the semelfactive/activity verb *peng* (bump), but also brings about the event of "bumping into someone" into realization.

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[22] The unit of word in modern Chinese has evolved from monosyllabic to dissyllabic, For example, the word "friend" is "*peng-you*" in modern Chinese. Any textbooks or Chinese-English dictionaries would explain *peng* as friend, and *you* also as friend. Many CL2 learners are puzzled and would invariably ask why the Chinese need to combine "friend" and "friend" to express the idea "friend". In old Chinese, *peng* designates "friends who have the same hobby of habit", and *you* "friends who have the same professional or intellectual abilities". Since the Chinese lexeme has become mostly dissyllabic, the idea of "friend" is then combined with two different characters that both mean "a type of friend".

This raises the questions about the functionality of the perfective marker -*le* and the relationship between the boundedness and the perfectivity. We assume, based on the discussion of these examples, that the verb -*le* can be only combined with the verb of a bounded event, which does not have an aspect by itself until the perfective marker is added so that the "wholeness" of the event from the beginning to the endpoint can be realized. In other words, boundedness is a pre-requisite for an event to become perfective, but the perfective marker -*le* brings the event into its actualization and completion.

(D) By Being the First Event in a Sequence

An event is bounded when it is the first in a sequence and another event happens or a new state emerges after that event has taken place. The 1st event is of interest as an unanalyzed whole and its occurrence is bounded temporally, syntactically[23] and semantically by the subsequent event as shown in (42) and (43):

(42) *Yuehan he -le cha jiu hui jia*

John - drink- PFV - class - then - return - home

John will go/goes/went home after he has/had (the/some) tea.

(43) *ta xie -le ni xie.*

he - write - PFV - you - write

You write/wrote after he finishes/finished writing.

[23] Word order in Chinese is an iconic representation of the sequence of events of the extra-linguistic or cognitive world, and due to its lack of overt tense markers, Chinese word order strictly adheres to the 'Principle of Temporal Sequence' (PTS), a principle formulated by Tai (1981) in order to explain syntactic relations in Chinese, which stated that "the relative word order between two syntactic units is determined by the temporal order of the states they represent in the conceptual world" (Tai, 1981: 50).

(42) and (43) illustrate the fact that aspect is independent of tense in Chinese. The event in (42) and (43) may take place in the future, or in the past, or is habitual at the time when the sentence is spoken. This seemingly simplistic and straightforward temporal notion turns out to be difficult to acquire for learners of L2 Chinese who come from tense-language backgrounds. Example (42) also shows that the direct object, "tea", in the first event does not need to be quantified in order for *-le* to appear when it is followed by a subsequent event or events in a sequence. It also raises an interesting question about the "incompleteness" native speakers feel upon hearing an isolated utterance whose direct object is not quantified such as shown in (44):

(44) ? *Yuehan he -le cha*

John - drink - PFV - tea

John drank (the/some) tea.

The reason for (44) to be questionable is explained by the "unboundedness" of the "tea-drinking" event and the non-referential nature of the "tea" in question. It sounds more acceptable if *cha* "tea" is second-mentioned in the conversation and is a definite entity for both speaker and hearer in the dialog, such as *Yuehan he-le CHA* "John drank the tea (you bought) / that cup of tea." This is probably what Li and Thompson meant when they postulated that an event can be viewed as bounded by being specific or definite.

Apart from this list of boundedness that constitutes the contexts for the use of V-*le*, Li and Thompson also point out that, speakers may differ in their judgment as to whether an event is bounded or not, thus impacting the consistency of decisions to use V-*le* in a sentence. According to Li and Thompson, the *rule* for the obligatory and the optional use of V-*le* "depends on what a speaker judges to be the significant information the sentence is

conveying in the context in which it is used." (1981:195). When speakers "…are presented with sentences in isolation, they have to imagine what the real conversational situation might be, and they might come to different conclusions" on the use of *-le* (1981:195). They further pointed out that "…understanding the grammar of a sentence always involves understanding how the sentence relates to the context in which it occurs." "…Whether a sentence expresses a bounded event depends to a large extent on the nature of the conversation of which that sentence is a part." (1981:201). While we agree with Li and Thompson's insight on the importance of the contextual information in which the use of V-*le* is impacted, we think their account of the speakers' judgment gave only a partial picture of the optionality of V-*le*. It is certainly true that a Chinese native does not use V-*le* in a sentence when s/he judges the event unbounded. However, a Chinese speaker can decide not to use V-*le* even when s/he judges an event bounded. Let us take sentences (45) and (46) to illustrate our point:

(45) *Yuehan yi hui (-le) jia jiu kan dianshi*
John - as soon as- return - (PFV) - home - immediately - watch - TV
John will watch/watches/watched TV as soon as he goes/went home.

(46) *ta xie wan (-le) ni xie.*
he - write - finish- (PFV) - you - write
You write/wrote after he finishes/finished writing.

That V-*le* is optional in (45) and (46) is not because speakers judge the events unbounded, but because some of them consider the use of V-*le* is redundant when the boundedness is encoded by other features in the utterance. The boundedness of the first

event of *writing* by someone in (46) is lexically encoded by the resultative verb complement (alos an achievement verb) *wan* "to finish", and syntactically bounded by the second event of *writing* by another person. The boundedness in (45) is encoded by both the achievement verb *hui* "to return", and reinforced by the temporal constraint "as soon as" that introduces the second event, *watching TV*. While we cannot form a rule/principle concerning individual speakers' judgments as to whether an event is viewed as bounded or not in a larger context, we can form hypotheses about the various contexts when native speakers of Chinese think the use of V-*le* is redundant in a bounded event. That is the task we set out to accomplish in this study and which we will discuss in Chapter 4.

2.1.2 Contexts where -*le* is disallowed and related rules

Similar to other L2 learners who need both positive and negative evidence in the acquisition of any linguistic feature, L2 Chinese learners not only need understand when to use -*le* in the right contexts, but also need to know when and where not to use -*le*. There are syntactic constraints that learners should know and teachers should teach, but the real task a Chinese L2 learner faces in the acquisition of V-*le* is not simply memorizing a number of rules. In order to have the native or near-native speakers' level of competency in the use of V-*le*, learners need to have a full grasp of the concept of boundedness and to be able to apply that understanding in different contexts.

Rules and examples about the ungrammatical use of -*le* usually are listed in certain types of grammar books such as *Error Analysis of Chinese as a Second Language* (Li D. 1996, for example). Li and Thompson (1981) gave conceptual guidelines and examples to show where not to use -*le*. T'ung and Pollard's *Colloquial Chinese* (1982) is probably one of the rare textbooks that specifically draws teachers' and learner's attention to the

disallowed contexts of V-*le*. While the rules for disallowed contexts cannot be listed exhaustively, the rule-of-thumb for disallowed V-*le* is simply this: when an event is not bounded, V-*le* should not be used. In other words, V-*le* is disallowed when the semantic condition of "boundedness" is not fulfilled in the context. The classic example to illustrate this point is when the direct object of an activity verb is not quantified or specified, V-*le* should not be used because it cannot perfectivize this unbounded situation. We return to (44), for a more detailed discussion:

(44) ? *Yuehan he -le cha*
John - drink - PFV - tea
John drank (the/some) tea.

We mentioned that to a native speaker, (44) sounds "incomplete", if not ungrammatical. This is because a simple unquantified direct object noun is usually indefinite and non-referential just like a mass noun. Normally, a simple activity verb phrase combined with such an unquantified direct object is not bounded. To make (44) semantically or temporally bounded, we have to add at least one of the following elements:

a. Quantify the object: John drank <u>two cups of tea</u>.

b. Specify the object: John drank <u>your tea</u>.

c. Make it a first event in a sequence: John will take a walk after he <u>drinks (the) tea</u>.

d. Add a time expression: John drank tea <u>in the morning</u>.

In fact, there are far more transitive verbs than intransitive verbs in Chinese. Apart from those indicating posture (such as *zuo*: to sit; *zhan*: to stand), body movement (such as *tiao*: to jump; *pa*: to climb) and emotion (such as *xiao*: to laugh; *ku*: to cry), the majority of

Chinese action verbs are transitive in nature. Many intransitive verbs or intransitive uses of transitive verbs in English have their Chinese counterparts as transitive verbs.

Table 2-1
Transitive verbs with bare NPs

Intransitive V in English	Counterparts in Chinese → Activity V	+cognate O
sing	*chang-ge*	sing-songs
sleep	*shui-jiao*	sleep-a sleep
walk	*zou-lu*	walk-road
swim	*you-yong*	swim-swims
talk	*tan-hua*	talk-utterance
meet	*jian-mian*	see-face

Ross (2004), in her "Schaum's Outlines Chinese Grammar", formulated a rule about an activity verb phrase containing a simple unquantified object: "If a verb suffixed with V-*le* has a one-syllable object, V-*le* typically occurs after the object." (2004:122). For example:

(45) *wo* *jintian* *zaoshang* *you-yong* *-le* [24]

I - today - morning - swim-swims - PFV

I swam this morning.

[24] Ross did not explain the motivation for this rule. However, we want to point out that, if this rule is theoretically and empirically grounded, it has an important implication on the distinction of V-*le* and S-*le*. V-*le* and S *le* have been traditionally distinguished by their syntactic position: S-V-*le*-O for V-*le* and S-V-O-*le* for S *le*. If V-*le* should be placed after monosyllabic direct object for the sentence to be grammatical, then the *le* in S-V-O-*le* should not automatically be considered as S-*le* in linguistic theory or in experimental studies.

Actually, Ross' "one-syllable object" rule should be modified as follows so it is more specific and accurate in different contexts with different types of verbs: "If an *activity* verb has a one-syllable object, V-*le* typically occurs after the object *if the event is not the 1st one in a sequence*." Let us illustrate this modified statement with the following examples:

(46) *wo [jintian zaoshang] you -le yong cai qu shangban*
I - [today - morning]- swim -PFV- swims -only then - go - work
I went to work [this morning] only after I went swimming.

(47) *ni zhidao ma? Laozhang shuai-duan -le tui!*
you-know-Q? Old zhang- fall-break - PFV -leg(s)
Do you know that--Old Zhang broke his leg(s)!

(45) and (46) both talk about the event of *you-yong* "swimming", but it is an independent event in (45) and a first event in a sequence in (46). The PFV *-le* is suffixed right after the verb *you* "to swim" in (46) instead of after *yong* "swims" as in (45) because it is bounded temporally (and syntactically if we apply the Principle of Temporal Sequence) by its subsequent event *qu shangban* "to go to work". In (47), the event of "leg breaking" is an independent event, but the PFV *-le* is still suffixed after the RVC *shuai-duan* "fall-break", not after *tui* "leg(s)" as Ross' rule instructed. The reason for this difference is the rule-of-thumb we mentioned at the beginning of this section. That is, the event is semantically bounded in two ways: (1) The RVC *shuai-duan* "fall-break" is an achievement verb with a built-in endpoint so the event is viewed as a single whole; and (2) unlike the cognate objects we listed previously, the monosyllabic object *tui* in (47) "the leg(s)" is a definite object, that is, Old Zhang's own leg or legs. Therefore, Ross' rule

cannot be applied to (1) activity verbs as the 1st event in a sequence; and (2) most of RVCs functioning as achievement verbs; and (3) activity verbs that have "reflexive" meaning[25] such as break one's leg(s), wash one's face, and brush one's teeth…etc.

However, things get more complicated when these "Activity Verbs + cognate object" have a quantified expressions specifying distance or duration, such as "I sang for 10 minutes" or "they walked for a long time" or when they have two complements (in Chinese) such as "I met with him yesterday". There are syntactic rules to follow when those verb phrases are combined with V-*le*, for example:

(48) I sang for 10 minutes.

(48a) **wo chang-ge -le shi fenzhong*

* I - sing-songs -PFV -10 -minute

(48b) *wo chang-ge chang -le shi fenzhong*

I -sing-songs -sing -PFV -10 -minute

(48b') *wo ~~chang-ge~~ chang -le shi fenzhong*

I ~~-sing-songs~~ -sing -PFV -10 -minute

(48c) *wo chang -le shi fenzhong de ge*

I - sing -PFV -10 -minute - PAR -songs

(49) They walked for 10 miles

(49a) * *tamen zou-lu -le shi li*

* they walk-road -PFV -10 - mile

[25] Mandarin Chinese does not have overt "reflexive" markers such as Romance languages, and does not use "my" such as "I brush *my* teeth" as in English with these types of verbs. Therefore the rule has to be made explicit to the Chinese L2 learners to avoid generalization or negative transfer.

(49b) *tamen zoulu zou -le shi li*

they -walk-road -walk -PFV -10 -mile

(49b') *tamen ~~zoulu~~ zou -le shi li*

they ~~-walk-road~~ -walk -PFV -10 -mile

(49c) *tamen zou -le shi li de lu*

they -walk -PFV -10 -mile -PAR -road

(48b) and (49b) use the topic-comment construction by turning the "V + object" into a "topic" followed by the verb without object, while (48c) and (49c) turn the duration or distance into a modifier by using the "V-*le*-modifier-de-N" construction so that the N is quantified. In both cases, the perfective marker *-le* was intended to be suffixed to the verb without its cognate object acting as a barrier. If not for emphasis, native speakers usually use (48b') and (49b') by dropping the cognate objects instead of making a topic-comment construction as shown in (48b) and (49b) if the context is sufficiently clear for their interlocutors.

In the case of two complements (in Chinese) such as in "to meet someone", a co-verb (or considered as a preposition) is used:

(50) I met with him yesterday.

(50a) **wo zuotian jian -mian -le ta*

* I - yesterday- see -face -PFV -him

(50b) *wo zuotian gen ta jian -le mian*

I -yesterday -with -him -see -PFV- face

Apart from sentences with simple unquantized object, other ungrammatical sentences containing *-le* whose semantic conditions for the perfectivity are not fulfilled are numerous. While we cannot represent all instances, the most common ones that constitute pitfalls for Chinese L2 learners mentioned by Li and Thompson (1981) and T'ung and Pollard (1982) are summarized in the following rules:

1. V-*le* cannot be used with verbs expressing states that do not represent bounded events:

   (51a) *Yuehan xihuan *-le ta*

   John - like - *PFV - her

   John liked her.

   The grammatical way to express a past state in Chinese is to use an adverbial such as *congqian* "before":

   (51b) *Yuehan congqian xihuan ta*

   John - before - like - her

   John liked her before.

2. V-le does not occur with ongoing actions, since perfective (bounded) and durative (unbounded: progressive or durative) aspects are incompatible, even though the event in question happened in the past:

   (52) **Yuehan zai xue *-le zhongwen*

   John -PROG -study - *PFV- Chinese language

   John was learning Chinese.

3. V-*le* is incompatible with habitual or repeated events, since these are not bounded events viewed as a whole:

(53) **Yuehan zai zhongguo de shihou, meitian xue *-le zhongwen*

John -to be in - China -PAR- time- everyday - study - *PFV –Chinese language

John studied Chinese everyday when he was in China.

4. V-*le* does not occur in negative sentences such as (54a), the negative form of (54b):

(54a) **Yuehan mei he *-le henduo cha*

John - NEG- drink -*PFV - lots of - tea

John did not drink lots of tea.

(54b) *Yuehan he -le henduo cha*

John - drink - PFV - lots of - tea

John drank lots of tea.

The meaning of negative sentences—that some event does not take place or that some state of affairs does not obtain—is incompatible with the meaning of-*le*, which is to signal a bounded event. An event that does not occur cannot, in general, be bounded.

5. V-*le* should not be suffixed to the 1st verb in a serial verb construction sentence. Instead, it should be suffixed to the 2nd verb in such instances[26] as shown in (55). If V-*le* is suffixed to each and every verb in a serial verb construction, as shown in (56), then the three events of "standing up" , "opening the door" and "welcoming someone" are viewed as three separate and independent events without necessarily a connection among them:

(55) *wo qu (*-le) tushuguan jie -le liang ben shu*

I - go - (*PFV) library - borrow -PFV - two - CL - book

I went to the library and checked out two books.

[26] Liu et al (2006) in their *Practical Modern Chinese Grammar* postulated a theory for this rule: semantically, PFV -*le* has scope over all the predicates in a sentence.

(56) *ta zhan (-le) qilai kai (-le) men ying -le chuqu*

he- stand- (PFV) - up - open - (PFV)- door - meet - PFV - out

He stood up, opened the door and went to meet him.

6. V-*le* should be suffixed to the 2nd verb in pivotal sentences if the 2nd verb phrase is semantically bounded as shown in (57a). V-*le* should be omitted if the 2nd verb phrase is not semantically bounded as in (57b) or if the 1st verb in the pivotal sentences is a causative verb as shown in (58):

(57a) *ta zuotian qing wo chi -le yi dun fan*

he - yesterday- invite - me - eat - PFV - one - CL – meal

He treated me for a lunch/dinner yesterday.

(57b) *ta zuotian qing wo chi *-le fan*

he - yesterday- invite - me - eat - *PFV - meal

He treated me for lunch/dinner yesterday.

(58) *ta yao *-le wo xie *-le (yi fen) baogao*

he - ask -*PFV- me- write - PFV - (one - CL)- report

He asked me to write the/a report.

7. V-*le* should not be used with the so-called "say verbs", such as *shuo* "to say", *gaosu* "to inform, to tell" that form expressions of direct or indirect speech:

(59) *ta gaosu *-le wo ta bu lei*

he - tell -*PFV -I/me -he -NEG -tired

He told me that he was not tired.

(60) *ta shuo *-le: " wo bu lei."*

he -say -*PFV: " I -not -tired"

He said, "I am not tired"

8. V-*le* should not be used with verbs that take a verbal construction as their object:

(61) *wo jueding *-le meitian yundong ban ge xiaoshi*

I - decide -*PFV - everyday – workout -half -CL -hour

I decided that I would work out half an hour every day.

The boundedness in Chinese aspectual system is a complex and abstract notion that learners of L2 Chinese need time to grasp and to acquire through conversational interactions. In order to help learners to form some language specific rules, that is, to reset their parameters of perfective aspect from English to Mandarin Chinese, these rules need to be taught explicitly to learners in the instructional process.

2.1.3 Other characteristics of V-*le*

We already stressed the fact that the perfective -*le*, though often used to describe past situations, is independent of tense since it can be used in such non-past perfective sentences as an imperative, in simple futures, and in future or conditional sequence-of-action sentences. We also know that many sentences expressing past events need not have any-le, such as bounded events with perfectivizing expressions (e.g. RVCs). Furthermore, events that are not bounded, such as past habitual and repeated action, do not occur with V-*le*, even if they refer to past time.

Why is it, then, that sentences with V-*le* often seem to be referring to past time?

Even though V-*le* does not mean past tense, many perfective events reported in speech are events that occurred prior to the time of speaking. That means there is a correlation between events in the past and the appearance of V-*le*. Unless the context makes it clear that a different time is being referenced, a perfective sentence with V-*le* in isolation will be generally understood to refer to past time. On the other hand, it does not

follow from this that past-time events must be perfective. Only those past-time events that are bounded occur with V-*le*.

Verbal -*le* presents a situation that is being viewed in its entirety. However, this notion of "simple closure" does not necessarily mean the completion of an action. As we discussed earlier, perfective -*le* can indicate completion, termination or even inception in some contexts. Recall that the aspectual meaning does not usually hold at the verb or the verbal phrase level, but rather at the sentence level. Whether a sentence means the completion of a situation largely depends on the type of the verb and the direct object it takes. For example:

(62) *Yuehan zuotian you-yong -le*

John - yesterday - swim-swims - PFV

John swam yesterday.

you-yong "swim" is an activity verb with a cognate object that does not have an inherent endpoint, so (62) cannot be interpreted as "John completed his swim", but rather "John terminated/finished his action of swimming" at the time of this utterance. On the other hand, when an activity verb has a quantified object, it does encode the completion of an action (see discussion in 1.2.2 and 1.3):

(63a) *Yuehan xie -le san feng xin*

John - write - PFV - three - CL - letter

John wrote three letters.

While "writing letters" could be viewed as an activity, "writing three letters" is a process that nec

However, when the direct object of (63a) is changed to a non-quantified but

specified/definite object, it can mean either “termination” or “completion” depending on the context:

(63b) *Yuehan xie -le na feng xin*

John - write - PFV - that - CL - letter

John wrote that letter.

The “completion” in (63b) can be cancelled if it is followed by “… but he didn’t finish it.” Such conversational implicature cannot apply to (63a) when the sentence has a quantified direct object. Not every type of verb needs to have a quantified object to encode “completion.” Achievement verbs have an inherent endpoint in them. The event is viewed as “completed” (or bounded by its inherent [+ telic] and [+ punctual] temporal features) with perfective *-le*, with or without a quantified object. For example:

(64) *Yuehan zhong -le Letou*

John - win - PFV - Lotto

John won the Lotto.

Finally, when V-*le* is used with stage-level state predicate, it indicates inception:

(65) *hua dou hong -le*

flower all red -PFV

All the flowers turned red.

After discussing different contexts where V-*le* must be used, must not be used, and can be optionally used (or dropped), we can better understand why learning to use V-*le* is one of the most challenging tasks facing a Chinese L2 teacher and learner. Not only is it an

idiosyncratic feature that many languages do not have, but it also has complex semantic and pragmatic functions and rules. The best way for a L2 Chinese teacher and learner to make a good start is to abandon any attempt to equate V-*le* with a grammatical category such as tense in English (even though it is easier said than done), concentrating instead on the semantic notions of perfectivity and boundedness where the use of -*le* applies. For classroom learners of L2 Chinese, this point must be made clear and consistently reinforced throughout the entire instructional process, from beginner to the most advanced levels.

2.2. Grammatical accounts of the sentential -*le*

Any meaningful discussion about V-*le* should include a discussion on S *le* for all the reasons mentioned earlier. The perfective -*le* signals an event being viewed in its entirety, including the beginning and endpoint, as (63a) discussed in the previous section:

(63a) *Yuehan xie -le san feng xin*
John - write - PFV - three - CL - letter
John wrote three letters.

The sentential *le*, on the other hand, makes the beginning point and the end point of an event *optionally* visible depending on the context in which it is uttered, as shown in (66):

(66) *Yuehan xie xin le*
John - write - letter - CRS[27]
(i) John is going to write the letter NOW.

[27] In the absence of a better theory, we adopt Li and Thompson's "Currently Relevant Situation" (1981) as the semantic and pragmatic interpretation and discourse function for the sentence final *le*, and label it as CRS.

(ii) John is writing the letter right now.

(iii) John has written the letter—finally!

A sentence such as (66) "John-write-letter-CRS" can be interpreted as having at least three different meanings depending on the context: (i) "John is going to write the letter now" —if John is ready and about to start to write the letter; (ii) "John is writing the letter right now" —if John has started to write the letter a moment ago and is in the process or writing it; and (iii) "John has written the letter—finally!" —if I saw a freshly printed letter lying on John's desk and if I know that John was supposed to write such a letter. Out of these three contexts, John's letter writing event is viewed as an imminent event in (i), an on-going event without its beginning point or endpoint visible in (ii), and in its entirety with the beginning and the endpoint in (iii).

Linguists generally agree that the basic function of sentential *le* in Chinese is to signal a change or a reversal of a previous situation, or a "Currently Relevant State" (CRS), a term coined by Li and Thompson (1981). That is, "sentential *le* claims that a state of affairs has special current relevance to some particular Reference Time" (Li, Thompson & McMillian Thompson 1982: p. 22). This "Reference Time" can either be the time of the narrative or the time of the speech act. In either case, it is often important to signal that a proposition bears upon the immediate speech situation because the knowledge that it does may determine what the participants do next. In a broader sense, the sentential *le* signals that some event, state or comment is relevant to the "here and now" of the speech situation. What the relevance is, of course, must be inferred by the hearer. The speaker usually assumes that the hearer can figure out the relevance from the context.

Because the sentential *le* has the discourse function in Chinese of signaling a

"Currently Relevant State" in conversational contexts, the speakers of Chinese often use sentential *le* when they want to give their interlocutors updated information on a particular situation with some degree of personal endorsement. Even though syntactically the sentential *le* can be added to the end of virtually any statement, there are semantic implications and restrictions about its distribution in different modes and mediums:

1. The sentential *le* is never used when the speaker is asserting a general truth. A general truth always stays true and is not compatible with "change or reverse of a previous state" signaled by the sentential *le*, for example:

   (67) *ta* *xing* *Wang* **le*

   he – to have the surnam- Wang - CRS

   His surname is Wang

   Actually, (67) is not an ungrammatical sentence in itself. It does have a meaning in a particular context. If we learned that Little Zhang had been adopted by the Wang family and we want to update our interlocutors with this new information, we would use *le* at the end of the sentence to signal a reversal/change of the previous situation—that Little Zhang has now become Little Wang—with the implication of our endorsement to back up this information.

2. The sentential *le* is not used to describe general states or ongoing situations involving no change, for example:

   (68) *zheli* *you* *henduo* *shu* **le*

   here - have - many - tree - CRS

   There are many trees around here.

(69) Yuehan zai xie xin **le*

John - PROG - write -letter -CRS

John is/was writing the letter.

Again, (68) and (69) are not ungrammatical in a "reversal/change of state" context. If the speaker wants to signal that he or she noticed that there are many more trees here compared to some other time before, then sentential *le* should be used to indicate this "change of state" or "currently relevant state." By the same token, if John had refused to write the/a letter whose reference was known to both the speaker and hearer, but changed his mind subsequently and started to write it instead, then (69) is a perfectly grammatical and appropriate sentence for that context.

3. The sentential *le* is not used in a simple assertion of an event that happened in the past. Other aspect markers and syntactic constructions are used instead according to the need of the contexts, for example:

(70) *wo qu -guo Xibanya*

I - go - EXP – Spain

I have been to Spain.

(71) *wo -shi gen wo meimei yiqi qu -de*

I - ASSR[28]- with - I/my - younger sister - together - go - PAR

It was with my younger sister that I went there.

[28] ASSR means "assertion" here. *Shi* is usually translated into "to be", and "*shi …de*" is a construction to assert a truth or to emphasize the time, the manner and the means of a *past* event such as the underlined words in the following statements: "I went there by bus", "I went there yesterday" and "I went there with two friends". Because "*shi …de*" is used to assert the adverbials of past events, and because the learners of L2 Chinese often equate the perfective *-le* with past events, they inevitably confuse the use of "*shi …de*" with the perfective *-le* when they were initially introduced to this construction.

The experiential marker -*guo* is used for a past event such as in (70) and a special construction "*shi…de*" is used to assert the manner with which the event of (71) was achieved.

4. The sentential *le* is rarely used in academic and scientific writing and is practically non-existent in news reporting, speeches and lectures. In other words, the heavily conversational -*le* which most often is used to explain or comment on "here and now" is not usually compatible with some written forms. A novel that contains narratives and dialogs would illustrate the distribution of perfective -*le* and sentential *le* clearly: the perfective -*le* is mostly found in narratives that describe, relate and connect different events, while the sentential *le* is mostly found in dialogs that explain or comment on events that are relevant to current situations.

After discussing the contexts where sentential *le* should *not* be used, we will now turn to the contexts in which sentential *le* should be used. Those contexts can be broadly grouped into five categories (Li & Thompson 1981; Li, Thompson & McMillian Thompson 1982; Yip & Rimmington 2004) where sentential *le* is used by a speaker to convey the notion of "currently relevant state" if the state of affairs it represents indicates one of the following 5 contexts:

1. It is a change or a reversal of a previous state
2. It corrects the interlocutor's supposedly "wrong assumption"
3. It reports "progress so far" and/or determines what will happen next
4. It is the speaker's endorsement for the updated information
5. It closes a statement, wraps up a story or sums up a series of events

(71a) and (71b) will compare the contexts where there is a change/reversal of a previous state:

(71a) *wo bu chi*

I - NEG - eat

I am not going to eat.

(71b) *wo bu chi le*

I - NEG - eat - CRS

I am not going to eat anymore.

While (71a) and (71b) contain exactly the same words with the same structure, the sentential *le* added in (71b) not only conveys the message of a state that is new or changed from the way it was before, but it also implies that the speaker has eaten some food prior to the speech time.

Chafe (1970) pointed out that a statement such as “the soup is hot” is ambiguous as it can be understood either as asserting that the temperature of the soup is high in absolute term or that the soup has reached the intended temperature the speaker had anticipated. While the only way for a hearer to sort out these two interpretations in English is depending on the contextual information, this ambiguity is nicely contrasted in Mandarin Chinese by the use of the sentential *le.* (72a) and (72b) further demonstrate this contrast.

(72a) *taozi hen shou*

peach - very - ripe

The peaches are ripe.

(72b) *taozi hen shou le*

peach -very - ripe - CRS

The peaches have ripened (now).

(72a) indicates that the peaches in question are already ripe at the moment of speech without reference to their previous state, while (72b) implies that those peaches were not ripe in a previous state (for example, three days ago when they were purchased by the speaker), but have become ripe in the current state. Whether we call it a reversal or a change of a previous state, the sentential *-le* refers to "here and now" of the event in question with the inference that there is a difference between the current and the previous states. (72b) can also be used to correct a wrong assumption of an interlocutor in the right context. For example, if someone said "By the way, didn't we buy some peaches a few days ago? But I guess they are still quite green." and we want to inform that person that contrary to his/her assumption, those peaches are now ready to be eaten, we would use (72b) to convey this message. Again, this function of sentential *le* is quite novel to many teachers and learners of L2 Chinese, and they need time, input and situational practice to acquire this function. Once (72b) is uttered, the hearer and the speaker can then assess the "progress so far" concerning the peaches and decide "what will happen next": that they are going to eat those peaches right away, or make a peach tart for dinner or bring some to the office to share with colleagues…etc. Other examples of this function of reporting "progress so far" may be expressed by accomplishment events with quantified expressions with a sentential *le*. Let's compare (73a) and (73b):

(73a) *Yuehan xue - le san nian Zhongwen*

John - study - PFV - three - year - Chinese

John studied Chinese for three years.

(73b) *Yuehan xue - le san nian Zhongwen le*

John - study - PFV - three - year - Chinese - CRS

John has studied/has been studying Chinese for three years.

The only difference between (73a) and (73b) is that (73b) contains a sentential *le.* What this sentential *le* adds to (73b) depends on the relevant conversational and contextual information, but most likely, it can either "correct a wrong assumption"—if someone stated that John has just started to learn Chinese, or "report progress so far" if the speaker wants to inform the hearer the length of John's learning Chinese to date, and continue with "what will happen next" as shown in (74):

(74) *Yuehan xue - le san nian Zhongwen le, mingnian jiu yao qu Zhongguo le*

John - study - PFV - three -year- Chinese –CRS, next year- then- go -China -CRS

John has been studying Chinese for 3 years, and is ready to go China next year.

Notice that both clauses end with sentential *le*. The first sentential *le* reports the progress so far on one hand, and is the speaker's endorsement on the updated information s/he brings up. The second sentential *le* informs the hearer what will happen next and sums up the situation which is "currently relevant". Another example on wrapping up a story or summing up a series of events is illustrated in (75):

(75) *Yuehan zai Zhongguo zhu -le ba nian, huan le san ci gongzuo, houlai jiu hui Meiguo le.*

John-in-China -live-PFV-8-year, change-PFV-3-CL-work, later- then-return-USA-CRS

John lived in China for eight years and worked four jobs. He went back to America later.

One may wonder whether the discourse function of the sentential *le* can be a basis for considering it to be a perfect aspect[29] marker. Aspect is generally thought of and is typically represented grammatically as a verbal category. That would seem to disqualify the sentential *le* as an aspect marker, since it is clearly a sentence final particle, not a verbal final particle. Although we do not intend to enter into this debate here, we would like to offer a few observations. If we adopt a "cluster" or "verb constellation" view (Smith 1991) of the universality of functional categories such as aspect, and if we recall that there is general agreement that aspectuality holds at the sentence level (Dowty 1979, Smith 1997, Verkuyl 1972), not at the verb level, the sentential *le* could then be considered as a perfect aspect marker in its own right.

Generally speaking, the presence of the sentential *le* indicates some kind of "stativity" (Li,Thompson & McMillian Thompson 1982). When the predicate is an accomplishment or achievement, as shown in (76) and (77) respectively, the sentence with sentential *le* presents the resultative state after the attainment of the goal.

(76) *Yuehan chi -le san kuai rou le*

John - eat - PFV - three - CL - meat - CRS

John has eaten three pieces of meat (by now).

[29] Whether "perfect" is an aspect or not is beyond the scope of this study. Consistent with Li, Thompson and McMillian Thompson (1982) , we assume it can be considered as a third type of aspect, along with the perfective and the imperfective aspects.

(77) *Yuehan dao -le san tian le*

John - arrive - PFV- three- day - CRS

John has arrived for three days.

(76) says that at the moment of speech John has entered into the state of having eaten three pieces of meat, leaving open whether the situation will be prolonged or changed (that is the discourse function of sentential *le*). (77) indicates that at the moment of speech John has entered into the state of having arrived for three days, and that state continues into the present. Since both accomplishment predicates and monosyllabic achievement predicates require the presence of the perfective marker *-le,* examples (76) and (77) are double *le* sentences.

When the predicate of a sentence presents unbounded situations such as states and activities, sentential *le* will yield an inchoative reading that presents either the coming about of a situation or the realization by the speaker of the coming about of a situation as shown below .

(78) *hua hong le*

flower - red - CRS

The flowers have become red.

(79) *Yuehan chi rou le*

John eat meat CRS

John eats meat now/John has started to eat meat.

(78) implies that “the flowers were not red before” or says “[I haven’t noticed until now that] the flowers have become red”, and (79) implies that “John didn’t eat meat

before", or "John hasn't touched the meat yet until now" or "[I noticed that] John eats meat now."

One of the advantages of not treating the sentential *le* and the verbal -*le* as a super *LE* is that we do not need to postulate a "shifted interpretation" for stative predicates, treating them as a "derived situation type". Instead, we can simply affirm that sentential *le* appears with all types of events (states, activities, accomplishments and achievements). That is, sentential *le* can be added to virtually any sentence regardless of its situation type. On the other hand, perfective –*le* does not appear with state predicates, since states are static and supposedly remain unchanging in order to be qualified as "states". However, a state must theoretically have its inception in order to come into existence. This is the inchoative reading that (78) yields.

2.3 SUMMARY OF CHAPTER 2

In this chapter we reviewed the grammatical accounts of V-*le* and S *le*, summarized the applicable rules with examples of sentences and minimal pairs, and commented on the rules advanced by Li and Thompson's (1981), Li, Thompson & McMillan Thompson (1982) and Yip& Rimmington (2004). We first reviewed the contexts where the usage of the perfective marker -*le* is obligatory, optional and disallowed as discussed by Li and Thompson (1982). One of Li and Thompson's most significant contributions was to introduce the concept of "boundedness" as a pre-requisite for a predicate to be viewed as perfective on lexical or sentential or discourse levels. They define the boundedness of an event with four contexts: (1) being quantified; (2) being definite or specific; (3) being inherently lexically bounded; and (4) being the first event in a sequence.

The notion of "boundedness" has been widely adopted by linguists discussing Chinese aspetual system, especially by those who take a two *le* position in the "*LE* debate." Even though we also embrace the notion of boundedness and adopt that terminology in this work, we disagreed with some of Li and Thompson's views, namely that the use of V-*le* is mainly based on the speaker's judgment, or point of view, as to whether an event is considered bounded or not. This position implies that there is no obligatory use of V-*le* among the native speakers of Chinese--as the use of V-*le* is tied to the boundedness, and the boundedness is in turn tied to point of view, which is more a personal judgment than a linguistic principle. Although the rules for disallowed use of *V-le* are spelled out in a few functional grammar books (including books focused on error analysis) and textbooks (Li and Thompson, 1981; T'ung and Pollard, 1982; Li, D.Z.,1996, among others), there are no specific treatments of *-le* in the grammatical accounts reviewed in this chapter concerning the precise contexts where *–le* must be used, and where the omission of it constitutes an error. We hypothesized that there are linguistic principles guiding native speakers to determine the obligatory and optional contexts for the use and non-use of V-*le*. While generalized rules for optionality are difficult to formulate, the non-optionality of V-*le* including both obligatory use and disallowed use should be theory-driven, and therefore should be learnable and teachable.

We also discussed the semantic properties and discourse functions of the sentential *le*. We agreed with Li and Thompson's position of viewing the sentential *le* as an "attitudinal" marker that performs multiple discourse functions--S *le* is not used to assert a general truth or a past event, or to describe an ongoing state involving no change. It is rarely used in academic and scientific writing, news reporting, formal speeches and

lectures. We also agreed with Li and Thompson's interpretation of S *le* as representing a "currently relevant state". According to Li and Thompson, native speakers use S *le* when they want to: (1) indicate that there is a change of a previous state; (2) to correct their interlocuters' "wrong assumption"; (3) to report the progress of an event; (4) to endorse the updated information they brought up in the conversation; or (5) to wrap up a story or put an closure to a series of events. This may not be a comprehensive summary of Chinese native speakers' knowledge and their use of S *le* but, in our opinion, Li and Thompson's account on S *le* is probably one of the most insightful and specific ones in their treatment of S *le* as a "currently relevant state" and strongly supports the argument for two *le*. It explains elegantly and persuasively why a single *LE* treatment seems untenable in a double *le* sentence such as "he-eat-*le* (PFV)-meal-*le* (CRS)", in which the speaker uses CRS *le* to update/to wrap up/to correct the interlocuter's wrong assumption with the information "he-eat-*le*-meal (he ate)" the speaker endorses.

CHAPTER 3

PREVIOUS ACQUISITIONAL STUDIES ON *LE*: THEIR INSIGHTS AND SHORTFALLS

Research on the acquisition of aspect in L1 and L2 Chinese has not been abundant. To our knowledge, studies in aspectual development, especially the development of *-le*, in L1 Chinese include Erbaugh (1977, 1978, 1985, 1992), P. Li[30] (1990), and Kong (1993). The data from P. Li (1990) have been reported in Li & Bowerman (1998) and Li & Shirai (2000). Studies on the L2 acquisition of the Chinese aspect, in particular the acquisition of *-le* or *LE*, include longitudinal case studies conducted by D.K. Sun (1993) and Zhao (1996), small scale cross-sectional studies conducted by Wen (1995, 1997), Teng (1999) and Yang et al. (2000), comparative studies (native speakers of Chinese vs. learners of Chinese) conducted by Duff and D. Li (2002), and corpus-based cross-sectional studies such as D.J. Sun (2000) and Yang et al. (1998, 1999) using the data from Interlanguage Bank established by Beijing University of Language and Culture. Most of the studies were concerned with the use of perfective *-le* in interlanguage. Three studies (Wen, 1997;Yang et al., 1999; and D.J. Sun, 2000) investigated the distribution of perfective markers *-le* and *-guo* and imperfective marker *-zhe*. Among these three studies, Yang et al., and D.J. Sun also investigated the interaction between situation aspects and viewpoint aspects.

[30] The Chinese have a limited number of surnames and an unlimited number of given names. Several researchers whose work we are going to discuss in this section happen to have the same surnames. To avoid confusion, we list the initial of their given names when there are two or more authors who have the same surname.

Except for one study (Yang et al 2000) that investigated Japanese and Korean learners of L2 Chinese, all the other L2 Chinese studies investigated learners whose native language was English. The following two sections briefly summarize some of those studies that are relevant to our project.

3.1 Studies on the acquisition of L1 Chinese

Three studies have investigated the acquisition of L1 Chinese. As we plan to investigate how the adult native speakers of Chinese use PFV -*le* and sentential *le* at the final stage of the acquisition, it is worthwhile having an overview on the initial and intermediate stages of acquisition by the Chinese children. Furthermore, understanding of the L1 Chinese aspect acquisition process might help us to better understand and explain the acquisition of L2 Chinese aspect.

Erbaugh (1992) studied four children; aged 1;3 through 3;10 in Taiwan in the early 1980s. The results of her research were reported in "The Cross-Linguistic Study of Language Acquisition", Vol.3. (Slobin, 1992: 405-442). Although not written specifically to investigate the acquisition of aspect in L1 Chinese, Erbaugh's detailed report on the development of children's expressions of temporality from ages 1 to 3 did contribute to our understanding of L1 acquisition of aspect.

In audiotaped longitudinal data collected at the children's homes, there were 2,300 tokens of -*le*[31] in 64 hours of data (that is one -*le* every two minutes!), compared with 100 or fewer tokens of other aspectual makers. "Young children first master whatever time/aspect system their language makes central. Young English speakers contrast past

[31] Erbaugh did not make clear distinction between PFV -*le* and sentential *le* in her report, but she discussed most of *le* Taipei children used as PFV-*le*.

tense to progressive/simple present. Young Spanish speakers contrast perfective with imperfective. Young Chinese must master perfective", observed Erbaugh (1992:425).

Erbaugh divided Taipei children's acquisition of temporal expressions into four cumulative, overlapping stages: (i) A general boundedness stage before 2; 4 focused on completion and "here and now" with PFV -*le*; (ii) An enhanced transitivity stage between 2; 4 - 2; 9 frequently double marked completion and result; (iii) A sequenced temporal relations stage, age 2;10 - 3;4, coordinated two or more events within a sentence where progressive and time adverbials became more important; and (iv) After about 3;4, a stage for developing narratives and background events emerged. Refinements continued through late childhood.

Taipei children used -*le* to describe ongoing, visible actions such as "cry -*le*" (I've cried), but they also understood that -*le* typically co-occurs with past. While 85% of early -*le* markings were used with past events, especially when the children were agents, only rarely were the events in the distant past. The majority (55%) of the -*le* they used referred to immediate past with achievement verbs that had a clear endpoint, either a punctual act such as *duan -le* ([It's] snapped) and *po -le* ([It's] broken) or a completion such as finishing a drawing. This seems to be a confirmation of the prototypicality of perfective markers associated with past events found in other L1 tense/aspect studies. However, the earliest and most frequent aspect marker -*le* was used for marking both perfectivity and a currently relevant situation. In fact, Erbaugh pointed out that "Every -*le* in the Taipei sample before MLU 2; 5 is ambiguous. All are both verb final and sentence final."[32] (1992:426). Children's early talk focused on the "here and now". Often, children used -*le* to call

[32] This is the characteristic of achievement and state verbs associated with PFV –*le* as we discussed in 1.3.2.

attention to a new topic or to report a present/immediate past event as hot news. Curiously, Erbaugh's study did not provide any examples of double-*le* sentences.

Although *zai*-, *-guo* and *-zhe* are not within the scope of our study, it is worth mentioning how the Taipei children acquired those three aspect markers. Around age 2; 4 the children started to use the progressive marker *zai*-, all correctly formed with activity verbs. They never used *zai*- incorrectly with state verbs. After age 2; 6, the children occasionally used the experiential *-guo*. Most uses were correct. They typically described extended, recurring activities such as seeing, sleeping and eating, rather than unique experience. Durative marker *-zhe* appeared about the same time as *-guo*, usually combined with activity verbs or mixed telic-state verbs such as "to wear" and "to hold" to background the narratives.

Taipei children also went through several stages in the acquisition of time adverbials. They used perfective markers frequently as young as 1; 10, but time adverbials only around 2; 4 - 2; 9.

Erbaugh did not really define the notion of perfective *-le* and sentential *le* for the data in her study, and had to conclude that "the very early *LE* Taipei children used were both perfective *–le* and sentential *le*". Not only does this approach affect the result and the conclusion of her study, more importantly, this conclusion runs into trouble with the pace of the children's cognitive and psychlogical development as discussed by Kong (1993).

Kong (1993) conducted a cross-sectional study using observation and guided conversation to investigate the emergence of perfective *-le* and sentential *le* in the speech of 43 boys and 47 girls aged 1; 00 to 5; 00 divided into 9 levels (6 months difference

between each level). His findings are very similar to those of Erbaugh's, but his conclusion is very different from hers.

In this study, verbal -*le* is coded as le_1 and sentential le as le_2[33]. The developmental pattern is distinctively marked with clear-cut stages. According to Kong, Chinese children acquire le_2 before le_1. The Chinese children in Kong's data showed that they did not use either *le* before 1; 00. They started to use *le* around 1; 5, and advanced rapidly with a very active use of *le* around 2; 00. Since this is the only longitudinal study exclusively concerning the acquisition of -*le* in L1 Chinese with a statistically significant number of participants, we will discuss in more detail the developmental trend of the Chinese L1 children in acquiring -*le*.

Around the age of 1;5, the ninety children produced 15 short structurally simple sentences with -*le* that comment or describe the present or immediate past events: (i) 6 instances with monosyllabic achievement verbs (fall, die, leave, drop…); (ii) 6 instances of RVCs (beat-dead, close-up…) ; and (iii) 3 instances of prototypical sentential *le* sentences (*bu*-V *le*, V+ direct object + *le*…).

Around 2; 00, the ninety children produced 38 -*le* along with some new developments. They started to use topic-comment construction with *ba* in sentences (S-*ba*-O-RVC-*le*) that encodes a result and a new situation rising from that result; started to use *le* with go/come in complex directional sentences (V + le_1 + movement V + go/ come) indicating direction in relation to the speaker; and started to express the concept of anticipated change of state (imminent event) such as "I-am going to-leave *le*".

Around the age of 2;05, they produced 8 tokens of prototypical perfective -*le* in structures such as: (i) V+ le_1 + quantified DO; and (ii) RVC + le_1 + quantified DO. Some

[33] This labeling has become the convention among the Chinese linguists who work on the aspect in Chinese.

sample utterances included, “I - plant- *le*$_1$ -many -trees”, “Yesterday…at…buy -*le*$_1$ - one -CL-little-black-dog”, and “beat-dead -*le*$_1$ - one -CL- ant”. If we compare those utterances to those five months prior, we notice that there is a striking syntactic difference: all the *le*$_1$ are followed by quantified direct objects which is one of several ways to mark the boundedness a perfective viewpoint requires.

Between age 3; 00 to 4; 05, there were more new developments. The children used V + *le*$_1$ with complements of time duration, complements of frequency, and complements of direction. Sample utterances of this stage include: “...play-*le*$_1$-one day”, “…practice -*le*$_1$ -one-morning”, “...touch-*le*$_1$-once…”, “...pat-*le*$_1$-more than 30 times”, “…get better-*le*$_1$-a little”, and “…rescue-*le*$_1$ -out-come”.

It is interesting to note that in these narratives (not in the isolated, short and simple sentences as we often see in experimental studies), children did not use *le*$_1$ (that is, the perfective marker -*le*) when it was optional. For example, -*le* is usually not used in adult speech after a RVC when it appears in the first event in a sequence. Children at this age (3;00-4;05) seem to have acquired the native understanding of the optionality of the use of the perfective –*le*, as shown in these complex sentences: “I see- perceive- ∅ - a boat, then I touch-*le*-once, then…”, and “…he then draw-∅-a knife-out-come …rescue-*le* –out-come”.

Between the age of age 3;5 to 5;00, the new development was the emergence of sentences with double -*le*. For example, they produced sentences such as “...I -now-learn -*le*$_1$–swim-*le*$_2$” and “…already-record-*le*$_1$-a very long time *le*$_2$”. Equally interesting is that when the children used double-*le* sentences, they often used “already” and “now”. This is an indication that they were able to make comments that related situations to a reference time, which was also the speech time.

Kong's study was not concerned with the interaction between situation type and viewpoint aspect. Instead, he asked two important questions concerning the linguistic theory of aspect in Chinese and the empirical study of acquisition in L1 and L2 Chinese aspect:

1. Which *le* did children acquire first, le_1 or le_2? Why?
2. Is there such a thing as le_1+le_2 when we analyze a sentence such as "he-leave-*LE*" or "(glass) hit- break-*LE*"?

Kong points out that the sequence of acquisition of le_2 and le_1 is closely related to the characteristics of le_1 and le_2 sentences and the psychlogical development of children. Semantically, sentential *le* (le_2) comments on the present or immediate past situations. The event time is immediately before the speech time. Perfective verbal -*le* (le_1) sentences, on the other hand, usually narrate/report situations in the past, and in some cases the event time is relatively distant from the speech time.

The acquisition of le_1 sentences requires a "long-term" memory. Since the development of memory is gradual in children, the acquisition of le_2 and le_1 sentences is accordingly gradual. The lexical development is from monosyllabic to dissyllabic words. Within these constraints, according to Kong, it is natural and logical for children to acquire more simply structured le_2 sentences before increasingly complex le_1 sentences.

The proponents of two-*le* linguists usually classify *LE* into le_1, le_2, and $le_1 + le_2$ with the following viewpoint aspectual distinctions:

le_1: the accomplishment/completion/termination (endpoint) of an event

le_2: confirming the change or the imminent change of a situation

le₁ + le₂: denoting the sum of le₁ and *le₂*, that is, an endpoint plus a change of state

Kong described the distinction among *le₁*, *le₂*, and *le₁ + le₂* with the following sentences drawn from his data:

(i) I-buy-*le₁*-three-CL-stamp.

(ii) Blow-big- wind-*le₂*.

(iii) Train-arrive-*le₁₊₂*.

(iv) Blanket-wash-clean-*le₁₊₂*.

(v) I-already-eat-*le₁₊₂*, don't-for-me-make-meal-*le₂*.

If we accept the convention and consider the -*le* in (iii), (iv) and the first clause of (v) *as le₁+ le₂,* we run into trouble explaining the acquisition sequence in children's Chinese, argued Kong. How would Chinese children (the 2-year olds) acquire the more difficult semantic notion (*le₁+ le₂*) before the simpler one (le₁ and/or le₂)? This is similar to the acquisition of the experiential marker -*guo*. There are two *guo* in Chinese, one being a verb (*guo₁*= finish) and the other being the experiential marker -*guo* (*guo₂*). *Guo₁* is more specific and less abstract than *guo₂* in terms of time relations, since *guo₂* refers to experience that children need to remember and be able to relate cognitively. According to Kong (1993) Chinese children acquire *guo₁* at 2; 00 and *guo₂* at 2; 05.

Kong concludes that the 2-year olds in his study all used achievement verbs that are telic, punctual. Those verbs inherently encode the semantic notion of "completion". When the 2-year olds used -*le* after achievement verbs, they were not marking the perfectivity redundantly, but used -*le* to comment on the change of state encoded by the VP. According to Kong, the -*le* in (iii), (iv) and the first clause of (v) are in fact all *le₂,* not *le₁+ le₂.*

We agree with Kong's point that children do talk about "here and now" before talking about a distant event, be it in the past or in the future. However, we cannot agree with his semantic analysis of (iii), (iv) and (v). We suggest that the first event in a sequence as shown in (v) is a "relative past" perfectivity, very different from inchoativity.

We also disagree with him in that semantically (iii) and (iv) only encode inchoativity As Comrie (1976) pointed out and as we have discussed in 1.3.2., when combined with PFV -*le*, many achievement verbs and state verbs encode the endpoint of an event X and at the same time the beginning point of an event Y. Both the endpoint and the beginning point are in fact the same point of two interrelated events in a continuum. The fact that the Chinese children talked about "here and now" before referring to a "relative past" perfective does not exclude the possibility that when they used achievement verbs with -*le*, they actually used them for the "here-and-now perfectivity".

Further, Kong's conclusion has an entailment that runs against the widely attested and supported Aspect Hypothesis in L1 aquisition. If Kong's children did not mark achievement redundantly using perfective marker, and used activity verbs (to plant, to buy) with the perfective maker le_1, then clearly these children did not associate perfective aspect with achievement verbs. Instead, they seemed to use all types of verbs (including state verbs with stage level predicate) with perfective marker *le*.

Kong's discussion of the semantic properties of perfective -le (le_1) and sentential le (le_2) is insightful in that it is argued from the perspective of L1 acquisition study. If his arguments on le_1, le_2, and $le_1 + le_2$ hold empirically and theoretically, it would put a halt to the decades old debate concerning whether there are two different -*le* (perfective and

sentential) and whether the *-le* in S-V-*le* is le_1, le_2, or le_1 + le_2. More experimental and longitudinal studies of this nature are needed before we can formulate a theory about *le*.

Below are the developmental stages of first language acquisition of *le* based on Kong 1993 with our revision and comments (noted with *).

Table 3-1
Developmental stages of child -le

ge	le_1		le_2		V-le_1.. le_2
1;6	X	accomplishment verbs +quantized O	√	inchoativity	X
	√ *	"here & now" achievement verbs & RVCs*	X*	change of state*	
2;00	X	(accomplishment verbs +quantized O)	√	change of state (here and now)*	X
	√ *	*ba* + O + RVC + le_1*			
2;06	√	accomplishment verbs +quantized O*	√	change of state + inchoativity	X
3;00	√	immediate perfective*	√	all functions	X
	√	optionality of le_1*			
3;06	√	relative past perfective*	√	all functions	√

Apart from these two studies, P. Li (1990) investigated the interaction between semantic classes and the use of the aspectual markers. He conducted three separate experimental studies with 135 young children in Beijing. These studies were designed to test Bickerton's Language Bioprogram Hypothesis and Slobin's Basic Child Grammar using comprehension, production and imitation tasks.

Bickerton's Language Bioprogram Hypothesis claims, based on the Pidgin-Creole connection, that the distinction between state/process and punctual/non-punctual is innate. Slobin based his Basic Child Grammar hypothesis on the cross-linguistic results of studies on L1 tense-aspect. He observed that whenever a language has an acoustically salient past

tense or perfective marker on the verb, its first use by the child is likely to comment on an immediately completed event that results in a visible change of state, such as situations denoted by the verbs "fall", "drop" and "spill". This observation is in agreement with the results reported by Erbaugh and Kong's longitudinal studies. His interpretation for the "here and now perfective" also supports our argument that the children in Kong's study acquired one of the PFV *–le* uses (with immediate past time reference) first and separately from the partial acquisition of sentential *le* (denoting inchoativity) that happened at about the same age.

Slobin (1985) proposed that result, with its complementary notion process, constitutes two universal "temporal perspectives" of Child Basic Grammar. Children come to the acquisition task with a pre-structured "semantic space" containing a universal and uniform set of semantic notions that are initially mapped onto the grammatical forms of the input language.

P. Li's study focused on children's understanding and the use of certain combinations of aspect markers, such as the perfective *LE*[34] and the imperfective *-zai*, *ne*[35] and *-zhe* and verb types distinguished by their inherent semantic features, such as the language specific class of Resultative Verb Compounds (RVCs) in Chinese.

RVCs are classified as a subclass of achievement verbs in our study. They are usually associated with the perfective marker *–le*: never with the progressive maker *zai-* or the durative marker *-zhe*. Li used 135 children, half boys and half girls, aged 3; 0 to 5; 0 for his comprehension study. The 135 children were divided into three age groups with 45

[34] Li argued for a Super *LE* which denotes "contrast to the previous state".
[35] *Ne* is a sentential particle. One of its many functions is to denote an ongoing process or a durative state. It usually appears with *zai-* or *zhe-*, but can be used alone at sentence final position. *Ne* is not an object of our investigation.

children in each group. For the production task, Li performed a quantitative and qualitative analysis of 1,007 tokens produced by 99 children aged 2; 9 to 6. The first analysis concerned a task describing events in picture stories. In the second, 72 children from the production task also performed an imitation task that contained grammatical and ungrammatical sentences which the participants were asked to identify as such.

Li reported that resultative and telic verbs (achievement and accomplishment verbs) occured almost exclusively with the perfective *-le*, and that the occurrence of *-le* with process verbs (mainly activity and some accomplishment verbs) dropped drastically in 6-year-old children in favor of the progressive markers *zai-* and the use of sentence final particle *ne*.

The results showed that children tended to associate the perfective marker (mainly *-le*) with telic verbs and the imperfective markers (mainly *zai-* and *ne*) with atelic verbs at the initial stages of acquisition. Li concluded that these findings lend support for Slobin's proposal that children are more sensitive to the process/result distinction rather than Bickerton's state/process and punctual/non-punctual distinctions. Li and Bowerman (1998) and Li and Shirai (2000), based on the same study and same results, pointed out that it is possible to explain such results with the revised Aspect Hypothesis[36] (Shirai & Andersen, 1995) and the connectionist model, both of which emphasize input without assuming the existence of cognitive predispositions.

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[36] The Aspect Hypothesis is associated with four predictions concerning form-meaning association: (1) Learners first use perfective (past) marking on achievements and accomplishments (events), eventually extend to activities and states; (2) In languages that encode the perfective/imperfective distinction morphologically, imperfective appears later than perfective, and imperfect marking begins with states and activities before extending to accomplishments; (3) In languages that have progressive aspect, progressive marking begins with activities, and then extends to accomplishments; and (4) Progressive marking is not incorrectly overextended to states.

Li's finding that the Chinese children tended to associate the perfective marker with telic verbs is consistent with Erbaugh and Kong. However, the findings reported by Erbaugh and Kong put more emphasis on the primacy of punctuality over telicity. That is, the Chinese children in their studies associated *-le* with achievement verbs much earlier than they did with accomplishment verbs. The Chinese children in of the three studies appeared to make a distinction between punctual/non-punctual and telic/non-telic. This suggests that if the acquisition pattern of Chinese children can be generalized, Slobins's Basic Child Grammar of process/result distinction should then have an added sub-category punctual/non-punctual.

3.2 Studies on the acquisition of L2 Chinese

Studies of the acquisition of aspect by L2 Chinese learners have not been abundant. We will review some of the most relevant ones in this section. Except for the two longitudinal studies (Zhao, 1997; and D.K. Sun, 1993) that investigated the developmental patterns of perfective *-le* in interlanguage, all the other studies investigated the distribution of perfective *-le*. In addition, some of them also investigated the distribution of *-zhe* and *-guo*. All the studies discussed below used participants whose native language was English.

We will start by reviewing five studies investigating the acquisition of V-*le* and S *le* as it is the focus of our present project. However, we will also briefly discuss the other three studies that investigated the acquisition of aspectual markers other than or in addition to V-*le*.

3.2.1 Studies on the acquisition of *LE*[37] (verbal -*le* and sentential *le*)

D.K. Sun (1993) and Zhao (1996) conducted longitudinal studies that focused on the use of verbal -*le* in the interlanguage. Both studies observed beginning adult learners enrolled in intensive Chinese language programs in Beijing. Both studies found an over-suppliance of verbal -*le*. Since the learners were native English speakers, this overgeneralization has been attributed to the interference (negative transfer) of learners' L1. That is, it was assumed that they treated verbal -*le* as an equivalent of the English past tense marker -*ed*. D.K. Sun found that sentential *le* (including le_1+le_2) appeared earlier than verbal -*le*. Wen (1995) carried out a small-scale cross-sectional study investigating the acquisition order of the two *le* among American college classroom learners. Wen found her learners acquired the verbal -*le* earlier and more easily than the sentential final *le*. Teng (1999) investigated the order of acquisition between verbal -*le* and sentence final *le* and reported that the adult learners in his study living in a host environment acquired sentential *le* before the PFV -*le*. Sentences with both V-*le* and sentential *le* were the last to be acquired. Duff & Li (2002) did a small-scale comparative study on the use of perfective -*le* between native speakers and L2 Chinese adult learners in order to find out the differences of use of V-*le* between them. Following is a more in-depth of discussion of these studies.

D.K. Sun (1993) conducted a longitudinal study to find out the process of acquisition and the factors impacting on acquisition of *le*. His two participants L and W were both college graduates studying Chinese in an intensive immersion program in Beijing. Sun conducted one-hour free conversation (not elicited) once every two weeks

[37] Since most studies reviewed here did not offer a definition of perfective -*le* and sentential *le*, and did not specify how the tasks were coded or scored, we used *LE* to represent both V-*le* and S *le*.

with them over a period of 4 months. The first conversation took place 3-4 weeks after the start of the intensive program by both participants. Sun reported that L and W had different acquisition processes for verbal -*le* and sentential *le*: sentential *le* appeared before the perfective marker -*le* in L's interlanguage, while there was almost no *le* in W's. L's acquisition process can be roughly sketched as follows: Concept forming → the appearance of sentential *le* → the appearance of the PFV -*le*→ the conflict between -*le* and "shi….de" (a structure to emphasize the time, place and the manner of a past event) and between -*le* and the experiential marker -*guo* →the appearance of double *le*. L constantly monitored his usage of *le*, checking it consciously, changing his mind frequently and switching from one *le* to another.

W's acquisition process was very different from that of L. W rarely used either *le* in her conversations, even at the end of 4 months of the learning and immersion experience in a host-language environment. Her interlanguage focused on the content words, but neglected the functional words. When she did use *le*, W tended to use it at the end of a sentence, after a monosyllabic verb or a state verb. Her acquisition process can be characterized as: absence of *le*→concept forming → appearance of *le* at the end of sentences after a monosyllabic verb or a state verb without object→ overgeneralization of *le* with these kinds of verbs. Despite the different developmental patterns between the two learners, there was an overgeneralization for both learners in their use of *le*, probably resulting from the negative transfer of the English past tense.

Zhao (1997) conducted a 2-year longitudinal case study to investigate the types of mistakes learners make while attempting to use *le* (both V-*le* and S *le*). Zhao followed his single participant M for two years with 8 investigations at each of the following 3 stages:

after 3-6 months of classes; after 12-14 months of classes; and after 20-22 months of classes. He used two types of tasks to elicit production of *le*: a one-to-one conversation and elicited production task such as picture or video-based story retelling. Zhao reported that the acquisition of *le* was a difficult process for M. His main issue was the overuse of *le*, especially the verbal -*le* (all errors cited in the study were PFV -*le*). Zhao defined the overuse of -*le* in both optional and disallowed contexts. In addition to the overuse of -*le*, M often used verbal -*le* and sentence final *le* randomly in the early stages of his learning. He seemed puzzled by their semantic properties and pragmatic function, but favored verbal -*le* over sentence final *le*, most likely the result of category transfer. Zhao hypothesized that M considered V-*ed* in English and V-*le* in Chinese to be equivalent when he first learned the PFV -*le*. In later stages, M became more aware of the different semantic properties and pragmatic usage of the two *le*, even though he often went back and forth between the two *le* in the same sentence (e.g. Last night I watch-*le* TV… Oh, I watch TV *le*). Although the error rate decreased gradually over the span of 2 years, *le* has remained the most difficult linguistic feature for M when compared with the acquisition of other language features. Apart from the category transfer of V-*ed* =V-*le*, Zhao also pointed out that M's overgeneralization and fossilization of -*le* may have resulted from the complexity of the semantic property, pragmatic function and constraints of both *le*.

Wen's (1995) cross-sectional study had 14 native speakers of English learning Mandarin Chinese at an American college in regular Chinese language classes (5 hours/week). They were divided into 2 groups: 8 beginning-level with 14 months of instruction, and 6 more advanced with 26 months of instruction. Wen used three 25-minute interviews in the form of informal conversation over a period of 3 weeks with 3

tasks. The stimuli of the 3 tasks were designed to distinguish the verbal -*le* and the sentential *le* in the data. Wen reported that her classroom learners acquired the verbal -*le* earlier and more easily than the sentential *le*. Learners tended to associate verbal -*le* with achievement predicates such as "to forget" or accomplishment predicates such as "to buy many books". Verbal -*le* consistently appeared after the resultative verb complement "finish" such as in 'X-*wan*-*le*' (finished X-ing) even when it was optional. Learners' strategies in acquiring PFV -*le* seemed to be meaning-based. They associated the notion of completion with the verbal -*le*, and used temporal adverbs 'before' and 'after' as semantic cues signaling the boundedness of events. The learners used perfective -*le* almost exclusively with "absolute past" events, often accompanied by a past temporal reference (e.g. last week) or adverbials (e.g. already), but were less likely to use it to describe "relative past" events marking present or future completion. Learners seemed to transfer the notion of past tense into the use of verbal -*le*, and did not acquire the concept of sentential *le*, as 96% of S *le* errors were omissions. Wen's findings were consistent with Aspect Hypothesis in that learners used -*le* with telic verbs at the initial stage of acquisition on aspect. Her conclusion that verbal -*le* was acquired before sentential *le* differs from other findings such as Sun (1993) and Teng (1999). However, her findings are in agreement with those of Erbaugh (1992) and Kong[38] (1993) even though the data were not produced and collected under the same conditions.[39]

Teng (1999) investigated the order of acquisition between verbal -*le* (henceforth le_1) and sentence final *le* (henceforth le_2) using written assignments, including sentences and paragraphs, produced by 9 beginning-level students (gender, age, other foreign

[38] We refer to Kong's data with our interpretation on V-*le* and S *le* as previously discussed in 3.1.1.(p.87).
[39] Erbaugh and Kong's data were collected in a natural L1 setting, and Wen's in an experimental L2 setting.

language ability, starting level and hours of instruction were not specified in the study) enrolled at the Mandarin Center at Taiwan Normal University. All participants were native speakers of English. The scoring criteria were based on the framework of Lü (1981)[40]. The data were coded according to the following six types of *le*:

Table3-2
The six types of le structure based on Lü (1981)

Type 1: V + le_1+ (quantified) object	I- buy- le_1- 3 tickets. (PFV)
Type 2: V + object + le_2	He- go- home - le_2. (CRS)
Type 3: V + le_1 +object+le_2	I- write- le_1- reply letter- le_2. (PFV, CRS)
Type 4: V + *le* (le_1? or le_2?)	He- already- sleep - *le*. (PFV? CRS?)
Type 5: Adj + le_2	Shoes- too-small-le_2. (CRS: assertion)
Type 6: Noun/classifier + le_2	College student-le_2…. (CRS)

Teng reported that the learners in the study exhibited a "plateau" phenomenon in that the acquisition of *le* initially progressed quickly, but then flattened out and lingered for some time without reaching a peak. Type 1, where le_1 refers to the perfectivity of activity verbs, constituted the largest body of *le* sentences produced by learners in this study. While learners were more inclined to use le_1 in this semantic and syntactic framework, they were also the most error prone for the following reason. Teng, similar to Zhao, observed that the perfectivity is a semantically complex notion to acquire. He pointed out that learners were probably attempting to communicate a shade of completion that is close to the English simple past tense. Discriminating between the English past tense and Chinese perfectivity usually takes more than a couple of years of full-time

[40] This is the only study on the acquisition of aspect in Chinese that specified its scoring criteria. However, the optionality and the disallowed contexts were not specified.

instruction of Chinese. Teng therefore predicted that the error rate in type 1 sentences would remain high for a number of years.

Apart from reporting a plateau phenomenon on the acquisition of *le*$_1$, Teng also claimed that *le*$_2$ is semantically more straightforward than *le*$_1$, contra to other findings such as in Wen (1995), Erbaugh (1992) and Kong (1993). Teng's study of the acquisition order of *le* was geared toward its pedagogical implication. His research question was to determine which *le* should be introduced first to learners and how these concepts should be introduced. Based on his findings he suggested that (i) *le*$_2$ should be introduced before *le*$_1$; and (ii) le$_1$ should be introduced after learners had the knowledge of a fair number of basic action verbs and temporal expressions.

There might be some truth in Teng's claim that S *le (le*$_2$*)*is semantically more straightforward than V-*le (le*$_1$*)*, but this does not imply that S *le* is also pragmatically and syntactically more straightforward than V-*le*. The notion of inchoativity or change of situation encoded by S *le* is foreign to many learners, and its syntactic position does not make it easy for learners to access it in a complex sentences. We will discuss in Chapter 4 the semantic, pragmatic and syntactic constraints on both V-*le* and S *le*.

Duff and Li (2002) did a comparative study on the use of perfective -*le* between native speakers and L2 Chinese adult learners in order to determine the differences of the use of V-*le* between these two groups, and better understand the difficulties learners of Chinese L2 face when expressing and acquiring the perfective aspect. Nine native speakers of English studying Chinese (proficiency level and other L2 background not specified) at a Canadian university and 9 native speakers of Chinese who were graduate students (geographic region and other L2 not specified) participated in their study. They

conducted three tasks including a video story-retelling task, a personal narrative with a specified topic and a written editing task of a past narrative[41]. This study is the only one, to our knowledge, that described specifically how the data were collected, coded and analyzed with controls to ensure interrater reliability. The study focused on the suppliance and non-suppliance of *-le* by learners and native speakers in three different contexts: the obligatory use, the optional use, and the ungrammatical use of *-le*. The coding criteria for obligatory and ungrammatical use of *-le* were based mainly on Li and Thompson's accounts (1981) and the two coders' native speaker's judgment. The passage describing how they reached interater agreement on obligatory, disallowed and optional use of *-le* was particularly interesting and enlightening. It reported that "…high levels of agreement (above 94%) were reached for the obligatory vs. zero-marking categories (i.e. grammatical /ungrammatical contexts for *LE*[42]). However, "optional" cases posed some problems for the quantification of agreement, particularly with highly perfective RCs[43], for which one coder tended to omit *LE,* viewing it as optional, and one tended to supply it...[for] data produced by speakers of low-proficiency levels, it was often unclear [to the raters] whether an aspectual marking represented a grammatical, lexical, or logical error…" (Duff & Li 2002: 429). Not only did they point out the specific problems of reaching interrater agreement, but they were also the only ones, again to our knowledge, who raised the question of "optionality" in coding. Their approach revealed how the coding criteria can crucially affect the outcome of research in a domain where linguistic theory had not been well established, in this case, the theory of the perfective *-le*.

[41] Our survey "A trip to Beijing" reported in Chapter 4 was based on this written editing task.
[42] "*LE*" is their labeling for the perfective *–le*.
[43] "RCs", a.k.a. RVCs, refer to "resultative compounds".

Duff and Li's results showed that across the three tasks, native speakers used V-*le* far more frequently and correctly in both obligatory and optional contexts than the learners. The learners, especially those with lower proficiency levels, tended to undersupply V-*le* in their oral narratives, omitting it in certain obligatory contexts. On the other hand, within the larger context of under-suppliance of -*le*, the learners also tended to oversupply it with certain stative and non-perfective activity verbs. According to Duff & Li, there were a number of interrelated factors influencing the acquisition of perfective –*le.* Those factors included L1 transfer, cognitive factors related to the multifunctional load of -*le*, input factors, the interaction between grammatical aspect and lexical aspect, the discourse features of tasks (video-story retelling task vs. personal travel narrative), and the explicitness of the form-meaning connection in instruction.

3.2.2 Studies on the acquisition of *LE* and other aspect markers

In order to have a better understanding on the acquisition of *LE* compared to other aspect markers, we will briefly discuss three other studies that are relevant to our project. They are Wen 1997, Yang et al 1999, and D.J. Sun (2000).

Wen (1997) investigated the acquisition of perfective -*le,* experiential -*guo* and durative -*zhe* in a small scale cross sectional study. The progressive marker *zai*- was not included in the study. This study aimed to investigate the learning strategy of classroom learners and the roles that semantic, syntactic and pragmatic factors play in the process of acquisition of Chinese aspect markers. Wen divided 19 college L2 Chinese students into two groups: 10 in lower level with 15 months of Chinese, and 9 in more advanced level with 27 months of instruction. The experiments used guided conversation, written composition using a word list, and question-and-answer based on picture stories. Wen's

results showed that the students acquired the perfective -*le* and the experiential -*guo* before the durative marker –*zhe.* These results differ from other findings (Teng 1999, Yang et al 1999, D. J. Sun 2000, among others), some of which will be discussed in the next sections.

It is necessary to point out that in a classroom setting, the perfective -*le* and the experiential -*guo* are usually introduced much earlier than the durative -*zhe*. We are not sure how Wen defined "acquisition" in her study. Most researchers have reported that Chinese L2 learners start to use the perfective -*le* early in their learning process, but that their error rates remained high even for the learners with higher levels of proficiency. Wen reported that the process by which learners acquire the aspect markers appears to be meaning-based, such as looking for logical temporal sequence; using time adverbials and conjunctions for time references; and using pragmatic cues with perfective -*le* and experiential -*guo*. The lower proficiency learners in Wen's study relied more on the time adverbials and situation aspect than did learners at more advanced levels. The interaction between situation aspect and different types of aspect markers was also consistent with the general findings of L2 tense aspect studies.

Yang et al. (1999) investigated the pattern of the acquisition of -*le*, -*zhe* and -*guo* in L2 Chinese interlanguage. The study drew its data, which included 579 *le*-sentences, 199 *zhe*-sentences and 74 *guo*-sentences written by L1 English students of L2 Chinese, from the 1,300,000-word Interlanguage Data Bank set up by the Beijing University of Language and Culture. The sentences were divided into 8 levels, based on learners' completed academic semesters in a 4-year program. The study was both quantitative and qualitative. The results showed that -*le* was least frequently used with state verbs and most frequently used with accomplishment and achievement verbs. Situation aspect errors all occurred in

sentences with state and activity verbs, while the errors in sentences with accomplishment and achievement verbs were caused by the use of incorrect syntactic structures. There was a strong interaction between the acquisition of *-le* and *-zhe* with situation aspect. Quantitatively, learners' acquisition patterns confirmed the Aspect Hypothesis. Qualitatively, the analysis of error types produced by the learners' use of *-le* did not confirm the Aspect Hypothesis. Learners both overused *–le* and used it in places where it was not allowed. The acquisition of *-zhe* in this study also showed the effect of negative transfer. The Chinese L2 learners confounded the notion of "durative" with that of the "progressive" in English. The study concluded that learners showed different patterns on the acquisition of *-le, -zhe* and *-guo*. The error rate of *-zhe* and *-guo* was high at the initial stage of L2 interlanguage, but decreased rapidly with the increase of proficiency level. V-*le* remained a difficult linguistic feature to acquire. That error rate did not decrease proportionally with learners' increased proficiency levels. This conclusion is consistent with that of Teng (1999) and D.J. Sun (2000).

Sun (2000) also used the written data from the Interlanguage Data Bank set up by the Beijing University of Language and Culture to investigate how English speaking Chinese L2 learners acquired *-le, -zhe* and *-guo* while living in a host environment. The study drew a sample of sentences containing *-le, -zhe* and *-guo* from a 1,000,000-word bank and divided them into seven levels based on learners' length of study. There were 571 *le*-sentences, 199 *zhe*-sentences and 74 *guo*-sentences. Sun reported that there were close interactions between the situation type and the use of viewpoint aspectual markers, in particular for the durative *–zhe*. Sun also pointed out that the acquisition rate was different for *-le* and *-zhe*. *–Zhe* started as a difficult marker but the learners generally acquired it by

the end of Level 4 or the beginning of Level 5. However, the error rate of *-le* remained high even at or after Level 6. Sun attributed this asymmetry to the different semantic features, pragmatic functions and syntactic constraints between *-le* and *-zhe.*

The grammatical rules are much more straightforward and clear-cut for *-zhe* than for *-le*. The form-meaning mapping is also much more consistent for *-zhe* than for *-le*. While *-zhe* can only combine with state and activity verbs that have an inherent atelic feature which in turn corresponds closely to the notion of "durative" *-zhe* encodes, the perfective *-le* can combine with all four types of verbs, be it telic or atelic, dynamic or non-dynamic, punctual or non-punctual. The form-meaning mapping for *-le* is therefore vague and imprecise. Further, the syntactic, semantic and pragmatic constraints for *-le* are numerous and difficult to generalize.

For example, even though the learners tended to associate *-le* with achievement verbs such as "to leave", "to arrive" and produced correct sentences in their narratives, they were often prone to errors when they had to use activity verbs with *-le* as they were not able to judge whether the situation was bounded or not. This limited cognitive awareness extended to some achievement verbs such as "to find, to realize" and "to decide" when the syntactic constraints cancelled the boundedness they initially encoded. While it is perfectly alright to say "I-find out *-le-* a good restaurant" or "I decide *-le* -that matter", *-le* must be omitted after "find" and "decide" when their complement is a clause, e.g. "I- find -*le* - he- did- not - come" or "I - decide -**le* -we - have a meeting". The reason is that the situation presented by "he did not come" or "we have a meeting" is a fact (or a pseudo-fact), and a fact is a state which has no telicity, therefore unbounded. Learners need to have a large quantity of input of this type of sentences and a higher proficiency level before they

can internalize these rules with –*le*. As a result, -*le* has remained one of the most difficult linguistic features to teach and to acquire.

3.3 SUMMARY OF CHAPTER 3

The studies reviewed, whether longitudinal, experimental or corpus-based, all concluded that perfective -*le* (and probably sentential *le*) was the first aspect marker learners used in interlanguage[44], but that it remained the last to be "fully" acquired. The Aspect Hypothesis was largely supported by quantitative analyses, but disconfirmed by tqualitative analyses using the same data. There was also disagreement among researchers as to whether perfective -*le* or sentential *le* was acquired first, as well as whether sentential *le* should be considered as a separate entity such as a discourse marker or should be incorporated into a Super *LE* with perfective -*le* so that they could have an uniformed semantic treatment. The scoring criteria of the measurement instruments were therefore affected by this disagreement. As a result, the studies were not necessarily comparable due to the theoretical and methodological differences.

In terms of the use of V-*le,* the referenced studies reported that learners tended to overgeneralize the use of perfective -*le*, sometimes in contexts where it is disallowed, largely due to the negative transfer from English past tense -*ed*. However, in spite of this overgeneralization that results in oversuppliance, learners also had a tendency to undersupply it in contexts where it was required. This brings us to the central issue of our present project.

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[44] Few researchers seemed to make the connection between the time of introduction of a certain aspect marker in classroom setting situation where learners do not live in a target language environment and the appearance of that marker in learners' interlanguage. If V-*le* is the first aspect marker to be introduced, and –*zhe* is the last, with a span of 1 year between them, it is not surprising that V-*le* appeared in the interlanguage before other later introduced markers.

As we discussed earlier, the optionality of the perfective *-le* has remained an elusive concept to linguists and researchers, not to mention teachers and learners of L2 Chinese. When optionality or rather, non-optionality criteria is not clearly defined, the reliability and the generalizability of the results of studies of the acquisition of perfective *-le* are compromised. When a study discusses the oversuppliance and undersuppliance of V-*le*, there is a need to specify the context, and the syntactic and pragmatic constraints that (i) require the obligatory use of *-le*, (ii) allow the optional use or non-use of *-le*, and (iii) disallow the use of *-le*.

Based on these previous studies, we wanted to address two critical and under-researched questions. The first was to determine what constitutes the obligatory and the optional contexts for the use of V-*le* by the native speakers of Chinese. The second was to find out how learners operationalize the perfectivity in their use of V-*le*. In order to answer the first set of questions, we conducted a large-scale survey using native speakers to determine how they use V-*le* and S *le* in obligatory and optional contexts. We then used our findings to analyze the data from learners and their controls to answer our second set of research questions. Below are the two sets of our research questions:

I. How do Chinese native speakers use V-*le* and S *le*, and specifically:
   (1) In what contexts do Chinese native speakers consistently use and not use V-*le*?
   (2) What can be count as optional context?
   (3) What are the linguistic motivations governing the use of S *le* among the native speakers of Chinese?

II. How do adolescent learners of L2 Chinese use V-*le* and S *le* after three years of instruction in a non-target language environment, and specifically:

(1) What are L2 Chinese learners' patterns of use of V-*le* after the initial developmental stages?

(2) How do learners of L2 Chinese instantiate optionality for the use of V-*le* in written and spoken discourse?

(3) How do learners of L2 Chinese use the sentence final *le* in their discourse?

CHAPTER 4

A TRIP TO BEIJING: NATIVE SPEAKERS

4.0 RESEARCH BACKGROUND

Two factors, among others, have direct impact on the validity and the generalizability of the results reported by studies of the acquisition of aspect by L2 Chinese learners. The first is how the concept of aspect and its linguistic realization in Mandarin Chinese is taught and learned, and the second is how researchers define and capture the obligatory and optional contexts for Chinese aspect markers, especially the most controversial perfective V-*le*, in their studies.

As we have discussed, the perfective marker V-*le* and the discourse S *le* are the two most elusive linguistic entities in Chinese grammar. We have noted that, according to Smith (1997) and many other linguists, V-*le* represents the "viewpoint" of each individual native speaker as to whether they interpret the time contour of an event in a narrative as being perfective or see it in its entirety as a whole. The sentential S *le*, on the other hand, represents how each individual native speaker views the status of the event being discussed. Studies that have investigated the acquisition of the aspect markers in Mandarin have rarely stated how these "viewpoint" data were captured, and have not specifically described the related coding criteria. In the best cases, two raters would independently code such data. In instances when they disagreed, they would discuss their points of view until they arrived at a mutually agreeable, compromise decision, and report that result[45].

[45] Reported in Duff & Li 2002.

Most Chinese teachers, especially more naïve native speakers, do not know how to explain the concept of the aspect in Mandarin Chinese because they themselves do not understand the relevant underlying principles. Good teachers follow the prescriptive grammar. Not-so-good teachers tell students that the perfective V-*le* is the equivalent of an English past tense marker.

How the concept of aspect in Mandarin is taught in a CL2 classroom was not the primary concern for us in the scope of this study, as we could document that the learners in our study were not only taught the relevant grammar rules but also the semantic and pragmatic contexts related to the use of aspect markers. Instead, what concerned us was how we could consistently identify linguistically, from not only our individual points of view as native speakers, the oversuppliance and undersuppliance of the perfective marker V-*le* in our experiments and code that data in a consistent and reliable manner. We also were concerned, as noted in Chapter 3, that the major acquisitional studies on V-*le*, S *le* or *LE* did not specify what constituted the contexts of obligatory, optional and disallowed uses of V-*le* and S *le* in their methodology.

There has been no consensus on the meaning and the use of Chinese perfective V-*le* in linguistic literature. What we know from this literature is that it performs multiple functions within the domain of perfectivity. There are contexts where it can be unused and the perfectivity is still conveyed, and there are contexts where it is disallowed, even though the context is in the past temporal frame. A few studies have attempted to describe either the obligatory or the optional contexts of V-*le* with limited success, mostly because their conclusions were either too syntacticslly-oriented (Li X-Y, 1989) or too vague (Spanos, 1979; Chu & Chang, 1987; Chen 2000). For example, Chu and Chang (1987) concluded

that the verb suffix-*le* is basically used to build up the 'peak' of an event line; Spanos (1979), who favored a single *LE* treatment, concluded that V-*le* tended not to be used in contexts where the time, aspect, phase of modality of an action, process, or state of affairs was already specified. Li X-Y (1989) listed 5 syntactic contexts and postulated that any combination of at least 2 to 3 of these contexts would constitute the right condition for optional use of V-*le* in the discourse. While some of these findings were insightful, they were not principled and explanatorily adequate to be considered as guidelines for learners and researchers. So, without rule-based statements and explanatory principles a practical understanding of V-*le* remains elusive to linguists, researchers, teachers and learners.

We pointed out in Chapters 1 and 2 that Li and Thompson (1981) are the notable exception in terms of proposing rules and principles concerning the use and non-use of V-*le* and S *le*; and that Smith (1991, 1997) established the parameters of aspect with her two-component theory. While we think the grammatical rules of the Chinese aspectual system formulated by Li and Thompson in their functional grammar book "Mandarin Chinese" constitute an insightful and linguistically sound referential source for teachers, learners and researchers, we do not agree with all of their proposed rules. V-*le* is clearly optional in some of their "should be used" categories (see discussion in 2.1.1.).

Smith's writings (1991, 1997) on the parameters of aspect are probably the most authoritative references on aspectual system, yet contra Smith (1991, 1997) we do not assume Chinese aspect markers are always syntactically optional in all discourse contexts (see discussion in 1.3). There are certain contexts where V-*le* must be used in order for a sentence to be "grammatical" (for example, "he-die-*le*"*)* or for a sentence to become "perfective" (for example, "I-eat-*le*-3-cookie"). Smith stated that the neutral viewpoint

gives aspectually vague sentences “a weaker perfective reading” or “a stronger imperfective reading” (1991: 119-120). However, this theory cannot account for how people conceptualize aspect and why they choose to use or not use aspectual markers pragmatically in their conversation and discourse. We do not know whether the claim of “global optionality” of Chinese aspect markers was the logical conclusion of her position on neutral viewpoint, whether her concept of “global optionality” provided the theoretical foundation for her claim of neutral viewpoint, or whether these two concepts are one-in-two with different labels.

When we engage in experimental studies of the acquisition of different aspect markers in L2 Chinese, we first need to establish measurement criteria if our results and conclusions are to be reliable, replicable, and valid. Our measurement criteria had to explicitly determine: (i) the contexts where the absence of an aspect marker should be considered as “undersupply”, an error in the so-called obligatory context; (ii) the contexts where the presence of an aspect marker should be considered as “oversupply”, an error in the so-called disallowed context; and (iii) the contexts where an aspect marker is considered optional.

These issues are not addressed in textbooks or grammar books for a very simple reason: nobody has yet proposed a general guideline that captures the different uses of V-*le*. It is rare that any two native speakers would agree on all the instances where an aspect marker should or should not be used. This is especially true with the perfective -*le* and the sentential -*le*. This great variability in the use of perfective V-*le*, and to some extent in other aspect markers, is one reason why linguists and teachers of L2 Chinese say that V-*le* is often optional, but cannot specify the conditions of its optionality.

Since there is a difference between prescriptive grammar and linguistic accounts and the actual usage among the native speakers regarding the use of the Chinese aspect markers, and since not all native speakers agree with each other, establishing related measurement criteria was a challenge. If we relied on the rules stated by the prescriptive grammar, then the speech of many native speakers would be considered erroneous. Our solution was to conduct a large survey of Chinese native speakers to investigate the usage of V-*le* and S *le* through a cloze task with grammaticality judgment. Our goal was to delineate the obligatory, optional, and disallowed contexts of V-*le* and S –*le.*

4.1 RESEARCH QUESTIONS

Based on this background, we formulated our research questions as follows.

(1) In what contexts do Chinese native speakers consistently use V-*le*?

(2) In what contexts do Chinese native speakers consistently not use V-*le*?

(3) What contexts can count as optional?

(4) What are the linguistic motivations governing the use of S *le* among the native speakers of Chinese?

4.2 METHODS

4.2.1 Participants

For the purpose of defining the contexts of actual usage of aspect markers V-*le* and sentential S-*le* among native speakers of Chinese, we recruited two groups of participants as a sample of the native speaker population to address our research questions. 316 high school seniors from 17 to19 years old, and 213 staff and faculty members from 23 to 57 years old, all from a public high school in Nanjing, China, participated in this study. The

gender was about equally distributed between the two groups of participants. Most students were natives of Nanjing, but the staff and faculty members came from different regions of China. Residents of Nanjing, just like the residents in all regions of China, speak their local dialect at home but use Mandarin Chinese as the common language at school and in public places. Unlike Cantonese or Fujianese, the grammar of the Nanjing dialect does not differ significantly from that of Mandarin Chinese. All aspect markers (*-le*, *zai-*, *-zhe* and *-guo*, and sentential *le*) are used in daily conversational speech. The Mandarin Chinese spoken by the residents of Nanjing is regarded as standard.

4.2.2 Data Collection

The students completed the task in classrooms, in a well-controlled environment and supervised by their teachers. The staff and faculty members completed the task at the beginning of a weekly staff meeting. About 47 of the 213 responses collected from the staff and faculty members were so random and impossible for native speakers to produce that we concluded they was not credibly done and those responses were discarded.

4.2.3 Task Design

Since the purpose of this survey was to find out how Chinese native speakers use V-*le* and S *le* in a discourse, the *actual* occurrence of either V-*le* or S *le* in certain context would be determined based on the data collected. Nevertheless, we designed the task based on our own knowledge as natïve speakers as well as informed assumptions on how V-*le* and S *le* are used by Chinese natives.

We used a narrative as a grammaticality judgment task in cloze format (see Appendix 1 for the complete task). The narrative starts with the time adverbial “Last year, ...”, so the entire story was introduced against a background of a past time frame. The

task was composed of 25 clauses with 60 blanks. All the blanks were placed either after a verb (for V-*le*) or after the complement of a verb (for S *le*). The 60 blanks included 31V-*le* and 29 S *le*. We expected 7 occurences of V-*le* and 1 occurrence of S-*le* (for the last blank in the last sentence). The remaining blanks were 24 *V-*le* and 28 *S *le* (see Appendix 2).

We asked the participants to read the narrative silently as if they were telling the story to someone while completing the task. They were instructed to either write the character 了 (-*le*) in a blank if they felt it was needed, or mark an **X** if they felt -*le* was not needed according to their native knowledge. Below is an excerpt from the task :

去年我爸爸在中国工作 ____ ，所以我跟 ___ 我妈妈决定 ____ 去 ____中国旅行 ____ ，这样可以去 ____ 看看 ____ 爸爸 ____ ，也可以看看 ____ 中国人平常的生活情形 ____ 。

The task was coded as follows for reporting results:

OB V-*le*: $[le]_{v14}$	OP V-*le*: $[\ ]_{v16}$	* V-*le* or filler: $[*\ ]_{f/v6}$
OB S *le* : $[le]_{s60}$	OP S *le*: $[\ ]_{s9}$	* S *le* or filler: $[*\ ]_{f/s15}$

The 7 obligatory V-*le* (OB V-*le*) were coded as $[le]_{v14}$ and the 9 optional V-*le* (OP V-*le*) as $[\ ]_{v23}$. Below are two actual examples taken from the task.:

OB -*le* 我们在飞机上睡 $[le]_{v40}$ 五个钟头….

We slept $[le]_{v40}$ *for five hours….on the plane*

OP-*le* 放下 $[\ ]_{v54}$ 行李 $[*\ ]_{f/s55}$ 我们就去 ….

We will go *(there) after putting down* $[\ ]_{v54}$ *the* luggage..

The 1 obligatory S *le* (OB S *le*) and 6 optional S *le* (OP S *le*)[46] were coded as [le]$_{s60}$ and [ ]$_{s9}$. Below are two actual examples:

OB S *le* … 回 … 他北京的家 [le]$_{s60}$。

… went (back with him)… to his Beijing home. [le] $_{s60}$

OP S *le* ,也可以看看 …平常的生活情形 [ ]$_{s9}$ 。

, (and we) also could .....daily life [ ]$_{s9}$.

The 16 *V-*le* and 22 * S *le* in the task were coded as [ ]$_{f/v52}$ and [ ] $_{f/s53}$, with the former as *V-*le* and the latter * S *le*. Below is an example taken from the task:

*V-*le* & * S *le* 那么我们就先回［* ］$_{f/v52}$家［* ］$_{f/s53}$吧！

In that case, let's go [*] $_{f/v52}$ *home* [*] $_{f/s53}$ *first*.

For a detailed breakdown of all verbs and clauses in different coding categories (OB-*le*, OP-*le*, OB S *le*, OP S *le*, * V-le and *), see Appendix 3.

4.2.4 The distribution of verb classes

In the previous two chapters, we discussed the intrinsic interaction between the semantic classes of verbs (situation aspect) and aspectual markers (viewpoint aspect), a universal feature found in all languages. Based on that foundation, we designed our tasks to capture the explanatory adequacy of the contexts of obligatory, optional and disallowed uses of V-*le* and S *le*. We used Vendler's four verb types, but added the Resultative Verb Compound (RVC) as a sub-type of ACH. Below is a detailed description of verb types for obligatory V-*le*, optional V-*le* and for *V-*le*.

[46] In fact, we originally designed the task with only one obligatory S *le*, the last [*le*]$_{s60}$ indicating closure, and zero occurrence of optional S *le*.

(i) The distribution of verb types for obligatory V-le

Because perfective and state verbs are incompatible, there were no STA for the 7 tokens of OB V-*le*. There were 4 tokens of -*le* with ACC (accomplishment predicates), and 3 with ACH (achievement predicates). For a detailed breakdown on the distribution of the 7 tokens of OB V-*le* and 8 tokens of OP V-*le* with ACT, ACC and ACH, see Appendix 4 for the former and Appendix 5 for the latter. Below are examples from each class.

V40: ACC (V+QO)

shuì le wǔ gè zhōngtóu
睡了五个 钟头

…slept for 5 hours

V21: ACH (monosyllabic ACH)

…dào le běijīng
…到了 北京。

… arrived in Beijing .

V49: ACC (1st event in a sequence)

tīng le wǒ de huà jiù
听了我的 话 就…

…heard what I said, then

(ii) The distribution of verb types for *V-le

There were 2 tokens of *-*le* with STA predicates, 9 with ACT predicates, 4 with ACH predicates, and 1 with a RVC predicate. Below are examples from each class. For a detailed breakdown of verb class distribution among *V-*le*, see Appendix 6.

V27: STA

děng wǒmen
等[*] 我们

waiting [*] for us

V6: ACT

kěyǐ kànkan bà ba
可以看看[*] 爸爸

could visit [*] Dad

V52: ACH　　wǒmen xiān huí [*] jiā
我们 先 回[*] 家
let's go [*] home first

V30: RVC (ACT+ACT+ACH)　　pǎo guò qù [*]…
跑 过 去 [*]…
ran over (there) [*]

4.2.5 Coding criteria and conventions

We decided the contexts of obligatory and optional V-*le* and S *le* based on the data collected. The answers for each blank were recorded as 1 or 0, with 1 being suppliance and 0 being non-suppliance. If the percentage of respondents using V-*le* or S *le* exceeded 95%, the context was considered obligatory (See Table 4-1).

The disallowed *V-*le* and * S *le* were determined as follows: (1) The combined preference/usage by both groups; (2) The grammaticality judgment of the rater; and (3) Discussions of this rater with other Chinese native speakers including Chinese language teachers and grammarians.

Even though all the participants were native speakers, we considered the following while coding the *V-*le* and *S *le*: (1) Native speakers do make grammar and usage errors in speech production; and (2) Even native speakers tend to over-produce or under-produce due to task effect.

Coding conventions

We used the following labels to represent different terms:

CT: Chinese teenagers

CA: Chinese Adults

X: # of answers

OB V-*le*: the use of -*le* is required after the verb (obligatory V-*le*)

OP V-*le*: the use of –*le* is optional (optional V-*le*)

OB S *le*: the use of -*le* is required at the end of predicate (obligatory S-*le*)

OP S *le*: the use of -*le* is optional at the end of predicate (optional S-*le*)

*V-*le*: V-*le* is disallowed

*S *le*: S-*le* is disallowed

[*le*]: V-*le* is obligatory as in V42: eat-*le* 3 meals

[ ]: V-*le* is optional as in V_{16}: sit-on [ ] the plane for Beijing

[ ]: S *le* is optional as in S7:…so we could visit Dad [ ].

[*]: *V-*le* is disallowed as in V2: dec*ide* [*] or

[*]: *S *le* is disallowed as in S15: *saw each other* [*]

4.3 RESULTS

We designed the task with the assumption of 7 obligatory use of V-*le* and 1 obligatory use of S *le* (if not 100%, very high percent use of –*le*) , 24*V-*le* and 28 *S *le* (extremely low or zero percent use of -*le*) based on our native knowledge, our own speech preferences, and informed linguistic knowledge.

However, the 482 native speakers in this study surprised us with their use of V-*le* and S *le.* For example, the results showed that there were no obligatory S-*le* contexts in the narrative (See Table 4-2). The following tables (4-1 and 4-2) both show the percentage of use of V-le and S le in descending order.

Table 4-1

V-le usage percent per token and group in A Trip to Beijing

	OB + OP V-le (ranked)		CT X/316	CA X/166	CT+CA X/482
V42	eat-*le* 3 meals	吃了三顿饭	**99%**	**100%**	**99.2%**
V44	watch-*le* 2 movies.	看了两部电影。	**99%**	**98%**	**98.9%**
V40	sleep -*le* for 5 hours	睡了五个钟头	**99%**	**96%**	**98.3%**
V49	hear-*le* what I said then	听了我的话就…	**97%**	**99%**	**98%**
V19	stop-*le* for 2 hours,	停了两个钟头,	**98%**	**93%**	**96%**
V14	see-*le*-face, then ,	见了面, 然后…	84%	81%	83%
V21	arrive-*le* in Beijing .	到了北京。	85%	67%	79%
V16	board-*le* the plane	坐上了去北京的飞机	64%	55%	61%
V59	return-*le* (home)	回了他北京的家	47%	42%	45%
V54	(after) put-*le* down the luggage	放下了行李	44%	31%	39%
V25	see-*le* Dad	看到了爸爸	39%	31%	36%
V12	return-*le* (home)	回了波士顿的家	32%	27%	30%
V57	sit-*le* (in Dad's car)	坐了爸爸的车...	19%	22%	20%
V23	as soon as we get-*le* out of the airport	一出了飞机场	19%	11%	17%
V31	speak-*le* with him	跟他说了话	13%	15%	14%

We used the combined scores of both groups (CT+CA/last column) as our reference. From V42 to V19, the usage ranged from 99.2% to 96%. V14 followed, with use of 83%. Because of this 13% gap, we determined that the distinction between obligatory and optional contexts of V-*le* in this task should be reflected at the 95% level. One might argue that there is a big gap between V14 (83%) and V16 (61%). If V16 (61%) is optional, then by virtue of comparison, V14 could be qualified as obligatory. However,

we think it is difficult to conceive that V-*le* is obligatory in a certain context when it was not used by 17% percent of 482 participants. At the same time, we want to make it clear that 95% of cutoff line was solely our decision, based on the data, for the purposes of this study.

Table 4-3
S-le usage percent per token & group in A Trip to Beijing

	S-le OP (ranked)	CT X/316	CA X/166	CT+CA X/482
S7	..so we could visit Dad [*le*], 这样我们可以看看爸爸 [了],	55%	46%	52%
S9	.also could see the Chinese daily life *[le*] 也可以看看中国人平常的生活情形[了]。	40%	30%	36%
S28	...waiting for us [*le*] at the exit[47]. …在出口的地方等我们[了]	38%	28%	35%
S60[48]	went back to his home [*le*]. 回他北京的家[了]	27%	17%	24%
S1	My dad worked/was working in China [*le*] 去年我爸爸在中国工作[了]	24%	19%	22%
S48	now want to visit TianAnMen Square [*le*] 现在就想看天安门广场 [了]。	27%	14%	22%
S56	…we will go [*le*]… 行李，我们就去[了] 。	16%	24%	18%

Similar to our reasoning for obligatory and optional V-*le*, we determined, based on the data and our judgment, that the highest score for S-*le* (S7: 52%) was too low to be considered as an obligatory use. In our opinion, any obligatory linguistic context should have nearly 100% of usage rate by native speakers, adjusted for performance error and task effect.

[47] Due to the difference of word order between English and Chinese, the syntactic position of S-*le* is not always at the end of the translated sentence in English.
[48] This is the last sentence in the narrative.

Below is a breakdown showing the difference between the original design and the results from the the data collected in terms of obligatory and optional V-*le* and S *le*:

Table 4-3
Obligatory and optional V-le and S le determined by the data

Category	# of Tokens		Tokens
V-*le* OB	original design	7	(*V14*),V19, (*V21*),V40, V42, V44,V49
	based on actual data	5	V19, V40, V42, V44,V49
V-*le* OP	original design	3	V16, V54, V59
	based on actual data	10	V12,(+*V14*),V16,(+*V21*),V23,V25,V31,V54,V57,V59
S-*le* OB	original design	1	(*S60*)
	based on actual data	0	none
S-*le* OP	original design	6	none
	based on actual data	7	*S1, S7, S9, S28, S48, S56, (+S60)*

The contexts in which *V-*le* was disallowed were those we discussed in Chapter 2. For example, "to decide" in V2 took another verbal construction as its complement, and thus was not allowed to take V-*le* by virtue of not being bounded[49]. Both V10 and V17 were the 1st verbs in a sequence of related events and served as a means to accomplish the next activities which were the main events or the goals. V27, "to wait", was a state verb and another unbounded context. V33, V36, V39 and V51were all "say" (to ask, to tell, to say) verbs that introduced either indirect speech (V33 and V36) or direct speech (V39 and V51) which were not bounded, therefore the use of the perfective marker -*le* was disallowed. This is unlike an accomplishment predicate " say-*le* three words" or "ask-*le*

[49] Li and Thompson (1981) coined the term 'boundedness' and 'bounded event' to account for the function and the semantic property of the perfective –*le*.

two questions" in which the activity verb "to say" and "to ask" is followed by a quantized object (three words/two questions).

Table 4-4
*Percent use of *V-le percent per token & group*

	*V-*le*		CT X/316	CA X/166	CT+CA X/482
V36	I told him	我告诉[*] 他	15%	7%	12%
V2	decided	决定[*]	10%	5%	9%
V10	took [ ] the train to	坐[*]火车回….	6%	13%	8%
V33	Dad asked us…	爸爸问[*]我们	8%	4%	7%
V17	go [ ] to Beijing	去[*]北京的飞机	1%	4%	2%
V3	to go	去 [*]	1%	0%	1%
V51	…then said : OK…	就说 [*]	1%	2%	1%
V39	I said	我说 [*]	1%	0%	0.6%
V5	could go	可以去[*]	0%	0%	0%
V6	could visit [ ] Dad	可以去看看[*]爸爸	0%	0%	0%
V8	could see [ ]	可以去看看[*]	0%	0%	0%
V27	waiting [ ] for us	等[*]我们	0%	1%	0%
V30	ran over	跑过去[*]	0%	0%	0%
V46	all I want [ ] now	我现在就想[*]	0%	0%	0%
V47	all I want to see [ ]now	我现在就想看[*]	0%	0%	0%
V52	let's go [ ] home first	我们先回[*]家	0%	0%	0%

With the disallowed use of *V-*le*, some of the native speakers (from 1% to 15%) violated the prescribed grammar rules. However, all of them seemed to agree on the disallowed contexts of *S *le* when the notion of currently relevant state is not conveyed, be it "change of state", or "inception", or "correcting a supposedly wrong assumption", or "summing up a story". The results were reported in Table 4-5 below:

Table 4-5

*Oversuppliance of *S le percent per token per group*

	* S-le		CT X/316	CA X/166	CT+CA X/482
S4	travel [ ] in China,	去中国旅行 [ ],	4%	5%	5%
S15	saw each other [ ]	见面[ ]	4%	4%	4%
S35	whether we were hungry….	饿不饿 [ ]…	5%	0%	4%
S22	…arrived in Beijing [ ].	六点到了北京 [ ].	4%	1%	3%
S32	…ran to him and spoke with him.	跑过去跟他说话[ ]	3%	2%	3%
S41	slept for 5 hours [ ]	睡了五个钟头的觉 [ ]	2%	3%	2%
S18	..boarded the plane to Beijing [ ].	坐上去北京的飞机 [ ]	3%	1%	2%
S13	went back home [ ] ,	回波士顿的家 [ ],	1%	1%	1%
S34	whether we were tired [ ] ,	我们累不累 [ ],	2%	0%	1%
S37	I was not tired [ ]	我不累 [ ]	1%	0%	1%
S38	nor hungry [ ].	也不饿 [ ]。	1%	0%	1%
S43	ate three meals [ ]	吃了三顿饭 [ ]	1%	0%	1%
S53	let's go home first	我们先回家[ ]吧	0%	1%	1%
S11	took train [ ]and…	坐火车 [ ]	0%	0%	0%
S20	stopped for 2 hours [ ]	停了两个钟头 [ ] ,	0%	1%	0%
S24	as soon as we got out of the airport [ ]	一出了飞机场 [ ],	0%	0%	0%
S26	saw Dad [ ] waiting	就看到爸爸[ ] …等…	0%	0%	0%
S29	I was happy [ ],	很高兴 [ ] ,	0%	0%	0%
S45	watched 2 movies [ ]	看了两部电影[ ]	0%	0%	0%
S50	heard my words [ ].…	听了我的话 [ ]...	0%	0%	0%
S55	..go after putting down the luggage [ ] .	放下了行李[ ]就去。	1%	0%	0%
S58	sat in Dad's car [ ] ...	坐爸爸的车 [ ]...	0%	0%	0%

4.4 DISCUSSION

The optionality of the perfective aspect marker –*le*, or, of its opposite, the obligatory context of V-*le*, in the Chinese aspectual system has remained uncertain for linguists. Its use is highly dependent on discourse and syntactic structure (for example, in "BA construction" V-*le* is highly obligatory even with RVCs; but with "yi…jiu" structure, V-*le* is highly optional even with monosyllabic ACH), and semantically and pragmatically determined. None of the previous studies of the acquisition of the perfective marker –*le*,

compared with that of the sentential –*le*, by L2 Chinese learners, have addressed this question fully. Without a clear understanding of the role of the obligatory context and the optionality of V-*le* and S *le*, the results reported by those acquisition studies will remain unconvincing and/or incomplete. The results obtained from the data of this portion of our work may shed some light on this under-researched area.

We indicated previously that the main purposes for this large survey were (i) to determine the actual usage of obligatory V-*le* by the native speakers of Mandarin Chinese so we could use it as our coding criteria in our experimental studies; (ii) investigate the contexts of optional V-*le* as viewed by native speakers; and (iii) to investigate how native speakers use S *le* in discourse.

The results we obtained from this survey suggest that:

(1) The obligatory contexts for the perfective V-*le* are quite limited. There were only a few contexts in our data where native speakers consistently used V-*le* (eg. ACC predicates, ACT as the first event in a sequence, and monosyllabic ACHs).

(2) While the optional contexts for the perfective V-*le* remained less clear, there were traceable patterns of how native speakers viewed the perfective aspect in conjunction with the semantic properties of those verbs within its syntactic structures.

(3) The characteristics of the optionality of sentential S *le* were very similar to those of the optional V-*le*; that is, elusive but with traceable patterns.

(4) The native speakers oversupplied V-*le* and S *le* occasionally, contrary to the rules of the prescriptive grammar. We are not sure whether this was due to task effect or it was simply a natural language phenomenon indicating a potential shift of language use taking place.

(5) As Table 4-6 shows, the two groups of native speakers behaved very similarly in all the categories (OB V-*le*, OP V-*le*, disallowed *V-*le*, OP S *le*, and diallowed *S *le*). That is, despite the great variability among native speakers concerning the use of V-*le* and S *le*, they are consistent, as a group, in their judgements as to when V-*le* and S *le* should or should not used.

Table 4-6
Percent usage of V-le and S le per type & group

	316 C Teens	166 C Adults
V-*le* OB (5)	98.3%	97.7%
* V-*le* (16)	97.2%	97.8%
* S *le* (22)	98.5%	99.1%
V-*le* OP (10)	44.7%	38.2%
S *le* OP (7)	32.3%	25.3%

Our results are significant in that the findings disconfirmed some well-known proposals, as well as revealed the patterns of use of both V-*le* and S *le*:

(1) Linguists, such as Smith who is an authoritative figure in aspect theory, say that all aspect markers are syntactically optional. Our data show that it is not always the case. In at least five contexts, more than 96% of our participants judged V-*le* was not optional.

(2) Grammarians, such as T'ung and Pllard prescribe rules concerning the disallowance of V-*le*. Our data showed that a small percentage of our native speakers (from 7% to 12%, depending on tokens) defied those prescriptive grammar rules. This might suggest a shift in language use, or it may be the result of a gap between casual native speech and prescribed grammar rules.

(3) Lastly, our data demonstrated that:

(i) While obligatory contexts for V-*le* are quite limited in native speakers' speech, natives consistently use -*le* in well defined contexts, namely ACC predicates and ACT as the 1st event in a sequence, contra Li and Thompson's claim; and

(ii) Obligatory contexts for S *le* seem to be limited or non-existent, whether denoting inception, change of status, or closure, also contra Li and Thompson and other linguists of the field.

Further investigations are necessary, particularly with tasks designed to elicit S *le*, to better understand the application of obligatory and optional contexts.

4.4.1 Obligatory V-*le*

Based on the results of the data, the 482 native speakers agreed (with a minimum percentage of 96%) that of the 15 verbal phrases in the narrative, "A Trip to Beijng" there were 5 that required the perfective marker V–*le*. The 5 verb phrases in descending order based on the percent of agreement:

(1) V42: …吃了 三 顿 饭 , 99.5%
chī le sān dùn fàn

…ate 3 meals,

…eat-*le*-three-CL-meal

(2) V44: …(还) 看了 两 部 电 影 。 98.9%
hái kàn le liǎng bù diàn yǐng

…(and) watched 2 movies.

… (in addition, we) watch-*le*-two-CL-movie

(3) V40: 睡了五个 钟 头, 98.3%
shuì le wǔ gè zhōng tóu

…slept for 5 hours,

sleep-*le*-five-CL-hour

(4) V49: bà ba tīng le wǒ de huà jiù
（爸 爸）听了我 的 话, （就）… 98%

(Dad) heard what I said, (then)…

(Dad) hear-*le*-my-words- (then)

(5) V19: tíng le liǎng gè zhōng tóu
…停了 两 个 钟 头 , 96%

…stopped for 2 hours,

stop-*le*-two-CL-hour

In the above cases, V-*le* seems obligatory when the predicates/contexts are:

(i) Activity verb + quantized object → (ACC predicate)

V40: slept for 5 hours (,)…

V42: ate 3 meals (,)…

V44: (and) watched 2 movies.

(ii) Activity verb + specified object→ (ACC predicate as the first event in a sequence)

V49: (Dad) heard (listened –*le*) my words, (then)…

(iii) Monosyllabic Achievement verb + quantized object→ a shifted-type ACC predicate as the first event in a sequence

V19: …stopped for 2 hours,

There were 4 ACCs predicated in our task, and V-*le* was used with all of them by the native speakers. Based on this consensus of native speakers' use, the following two contexts appear to call for the use of OB V-*le*: (I) A Quantized ACC phrase (V19, V40, V42, V44) and (II) an ACT phrase as the 1st event in a sequence (V49).

(I) A Quantized ACC phrase (V19, V40, V42, V44)

Those quantized ACC phrases are mostly composed of ACT verbs (V40, V42, V44), and monosyllabic ACH verbs (Mono ACH) (V19) that are followed by a quantized O. The quantized object could be a quantized noun phrase which is the direct object of the ACT verbs ([eat- *le*] 3 meals, [watch-*le*] 2 movies), or a durational time phrase which either indicates the amount of the time spent on a certain activity ([sleep-*le*] {for} 3 hours) or on a certain state ([stop-*le*] {for} 2 hours). Notice that *stop* is an ACH verb, but *stopped for 2 hours* is an ACC phrase that indicates the duration of a state (being stopped). There are some category/type shifts from verb (stop-ACH) to predicate (stopped completely two hours ago and remained in that state of "being stopped") to quantized phrase (stopped for 2 hours –ACC). In Chinese, the durational time expressions appear syntactically and lexically, at least on the surface level, as direct objects. The verbal phrase "sleep for 3 hours" is *sleep-3-CL-hour* in Chinese (without the preposition or its equivalent "for"), which is syntactically similar to "eat 3 meals" in Chinese (*eat-3-CL-meal*). These quantized expressions, whether they are nominal or time adverbial phrases, are treated as the *direct object*s of verbs.

Dowty suggested that "…Vendler's attempt to classify surface verbs once and for all as activities or accomplishments is somewhat misguided…[and that] not just verbs but in fact whole verb phrases must be taken into account to distinguish activities from accomplishments…. In a certain sense, even whole sentences are involved…." (1979:62) He further pointed out that "…The problem of distinguishing between lexical verbs which *must* be accomplishments, those which *may* be accomplishments with the right time adverbs, and those which *can* be accomplishments only under special interpretations is an

interesting and difficult one…." (1979, p.62) His comment illustrates the complexity and uncertainty related to the classification of aspectual verb classes; a condition that he termed "lexical ambiguity."

Let us set *lexical ambiguity* aside for now and focus on the question of why the context of *quantized ACC phrases* requires the use of *-le* if the speaker's intention is to signal the completion or the termination of an event.

Prototypical quantized ACC phrases contain ACT verbs followed by quantified expressions such as 3 meals/few of X /a lot of X (quantity), 3 hours/a little while (duration), 3 miles/a long distance/to the park (distance), and 3 times (frequency). Some shifted-type quantized ACC phrases are made up of verbs other than ACT, as V19*…stopped for 2 hours…* demonstrated.

Quantity, duration, distance and frequency are all encoded with 'boundary'. Li and Thompson (1981) coined the term 'boundedness' and 'bounded event' to account for the function and the semantic property of the perfective *-le*. According to them, a bounded event is an event viewed in "its totality without reference to its internal temporal constituency" and "the entire situation is viewed as a single, un-analyzable whole" (p.184). A quantified event is one of four types according to Li and Thompson (p.185). Their interpretation of a quantified event is as follows:

> An event can be viewed as bounded when temporal, spatial, or conceptual limits are placed on it. What this means grammatically is that a verb typically will occur with *-le* if the event signaled by the verb is limited by overt phrases naming the

> extent to which that event occurred, the amount of time it took,
> or the number of times it happened. (p.186)

Li and Thompson did not specify what they meant by conceptual limits. We understand it to be quantity and frequency, along with duration (Li and Thompson's temporal limits) and distance (Li and Thompson's spatial limits).

Nevertheless, their interpretation was unclear in terms of the linguistic interaction between bounded-ness and perfective aspect. If an event is viewed as bounded (as a whole with an endpoint), it does not necessarily mean that it is in perfective aspect. Furthermore, a verb in a bounded context does not necessarily "occur with *-le*" as Li and Thompson claimed.

Let us review V40 [sleep for 5 hours (,)…], V42 [eat 3 meals (,)…], and V44 [(and) watch 2 movies]. In the case of "I sleep for 5 hours, eat 3 meals, and watch 2 movies *every day*", all the three events are semantically bounded individually, but they do not require and cannot take the perfective *-le* because the larger temporal context is *every day*. The same argument can be extended to another case: "I slept for 5 hours, ate 3 meals, and watched 2 movies *everyday last week*". Clearly, a restriction of "non-habitual, non-repetitive" should be placed for the bounded event to become perfective with the use of *-le*.

V19 […stopped for 2 hours,…] is the counter-example against Li and Thompson's argument that a verb typically occur with *-le* if "the event signaled by the verb is limited by overt phrases naming the extent to which that event occurred, the amount of time it took, or the number of times it happened." (1981:186) 19 native speakers out of 482 did not think it was necessary to use the perfective *-le* in this "bounded" context. We can find many other

examples that contradict Li and Thompson's interpretation for a quantified event to be regarded as a bounded event that requires the use of *-le*. Here is an example: "I saw three squirrels yesterday" 我 昨天 看见 三只 松鼠 (I-yesterday-look+perceive -3-CL-squirrels) does not need V-*le* to be grammatical, which some may argue is due to an overt temporal adverbial "yesterday" that licenses the perfective aspect. However, this utterance is also grammatical without the mention of "yesterday"- 我 看见 三只 松鼠 (I - look+perceive- 3-MW- squirrel).

Both *stop* and *look + perceive* (to see) are ACH verbs with an inherent built-in endpoint that signals the bounded-ness semantically. On the other hand, *eat, sleep,* and *watch* are ACT verbs that need a lexical phrase (e.g. a quantified expression) to give them an endpoint to be eligible (to be bounded) to become perfective when *-le* is added.

In summary, ACTs becomes bounded with quantified expressions and ACHs are bounded inherently. However, the boundedness and the perfectiveness are two different, but overlapping concepts. The boundedness signals the boundary/endpoint of an event while the perfectiveness indicates the completion and/or termination of a single, non-repetitive, non-habitual event. An event cannot be terminated/completed (e.g. viewed as perfective) if the event is not bounded.

(II) ACT phrase as the 1st event in a sequence (V49)

Syntactically V19 […*stopped for 2 hours* (in Tokyo, and arrived in Beijing the next morning at six)] and V49 [(Dad) *heard (listened-le) my words,* (then said…)] are both 1st events in a sequence. Their arrival in Beijing took place the next day *after* the plane stopped for two hours in Tokyo; and the narrator's dad said something *after* he listened to

the words pronounced by the narrator. Notice that the syntactic position of the 1st event in a sequence ***always*** occurs ***before*** the subsequent events, at least on the surface level, in Chinese.

The 1st event is usually connected to the 2nd by conjunctions such as *then* (ranhou), adverbs such as *right after* (jiu), *only after* (cai), *immediately* (ranhou), and time adverbials such as *next year* (ming-nian), *the next day* (di'er-tian), *in the afternoon* (xiawu)."

Semantically V19 is a shift-type ACC phrase, and V49 is an ACT phrase composed of an activity verb *to listen*.

Pragmatically, the native speakers diverged in the use of the perfective *-le* in these two cases (98% CT vs 93% CA for V19, and 97% CT vs 99% CA for V49) due to the different semantic properties of verbs between V19 (stop) and V49 (listen) even though both phrases are 1st events in a sequence.

Linguistically, the first event in a sequence is viewed as bounded by the subsequent event. Recall that a bounded event is an event viewed in its totality without reference to its internal temporal constituency; and that "the entire situation is viewed as a single, un-analyzable whole." (Li & Thompson: 184). They further pointed out that:

> Sometimes an event is bounded by being the first event in a sequence, where what is important is that after one event has taken place, another one happens or a new state materializes. In such cases, the first event is of interest as an unanalyzed whole; the speaker signals that its occurrences are *bounded* by the subsequent event. In these instances *–le* is used, and the sentence can often be translated with 'after', 'when', or 'now that' in English. (p. 198)

Because the first action needs to be terminated or completed before the start of the subsequent action, it is semantically bounded by the second one. In other words, the first event is licensed to be viewed as semantically bounded.

Since ACT does not encode an inherent endpoint, the only way to give the action an endpoint is to suffix the perfective *–le* to the verb *hear* to signal its termination. By 'only', we mean 'obligatory'. That is why 98% of 482 native speakers, if not more[50], used V-*le* in this context.

V49: （爸 爸）听了我 的 话, （就）…
bà ba tīng le wǒ de huà jiù

(Dad) heard what I said, (then)…

(Dad) hear-*le*-my-words- (then)

When a monosyllabic ACH (stop) with a quantized time expression (2 hours) is the first event in a sequence, native speakers felt it was necessary to use the perfective *–le* to signal the termination/endpoint of a state as in V19:

V19: …停了 两 个 钟头 , （第 二 天…）
tíng le liǎng gè zhōngtóu dì èr tiān

stop- *le*-two- CL- hour , (prefix-2-day)

…stopped for 2 hours (the next day…)

However, when a monosyllabic ACH (see) with a direct object (face) is the first event in a sequence, since the endpoint of the verb is inherently encoded semantically, the use of perfective -*le* to signal the termination of the action becomes optional for some native

[50] Several teenagers misinterpreted V49 "listen-to-my-words" as an idiomatic expression that means "have a soft ear for me". Since the idiomatic expressions do not require V-*le* in any contexts, the percentage of use of -*le* was the lowest compared to other 4 obligatory contexts.

speakers. Only 83% of native speakers felt it was necessary to use -*le* after the ACH verb *see*.

There may be a gradience effect working with optionality. V14, for example, is a "weak" optional context, but V54, V25, etc (see Table 1) are "strong" optional contexts.

V14: (I first…) saw each other, (then we….)

wǒ xiān jiàn le miàn ránhòu wǒ men
（我先…）见 ［了］ 面， 然后（我们….）

(I-first)…see-*le*-(each other's) face, then (we…)

Both *see* and *stop* are monosyllabic achievement verbs. V14 [(I first)…*saw* each other, (then we)…] is the first event in a sequence, but 17% of native speakers did not think it was necessary to suffix the perfective -*le* to the verb *see*. V19 [*stopped* for 2 hours (,) ….] is an earlier event in a sequence as well, but only 4% of native speakers did not think that V-*le* was obligatory. Why did the native speakers view two ACH verbs of a first event in a sequence differently? We think the answer is that V19 is a shifted-type of ACC phrase. Recall that the prototypical ACC phrase is ACT+ quantized O. In V19 the state of *stopping* is very similar to those *maintenance activity* verbs such as sitting, standing, smiling. We believe that the native speakers interpreted V19 as an ACC phrase and V14 as an ACH phrase. We argued earlier that ACC phrases are all bounded events which license the use of perfective –*le*. The native speakers' behavior in our study seemed to support this hypothesis.

The discussion and analysis of ACC and ACT phrases leads us to conclude that :

(1) The perfective marker –*le* is *obligatory* for an ACT predicate (ACT verb + non quantized O) in a perfective context, when it is the first event in a sequence, as shown in V49.

(2) The perfective marker -*le* is *obligatory* for an ACC predicate (ACT verb + quantized O) in a perfective context, whether it is the first event in a sequence or not, as shown in V40, V42, andV44.

(3) The perfective marker -*le* is *quasi-obligatory* for an ACH-turned-ACC predicate (ACH verb + quantized time expressions) in a perfective context, whether it is the first event in a sequence or not, as shown in V19.

4.4.2 Optional V-*le*

We have pointed out in Chapters 2 and 3 that optionality of Chinese aspectual markers is an understudied area, and that explicit rules or adequate explanations of the optional use of V-*le* by the Chinese native speakers are lacking. The optionality of V-*le* in this study was determined by our data (see Table 5), not by the grammar rules.

We discussed the linguistic factors that account for the *obligatory* use of the perfective -*le* with ACC phrases earlier in this section. We also discussed the possible reasons for the "optional" or "quasi-obligatory" use of the perfective –*le* for ACH phrases as the 1st event in a sequence as shown in V19. We now turn our attention to the divergence concerning the use of the perfective marker –*le* in other contexts found in our data.

In addition to the five obligatory V-*le* contexts, there were 10 verbal phrases with which the 482 native speakers used the perfective-*le* with variable occurrences . Graph 1 below demonstrates that there are two noticeable patterns on the use of V-*le* OP:

(1) Even though the optionality of V-*le* is viewed differently from speaker to speaker, there is a general agreement among the native speakers on when to not use V-*le*.

(2) There is an age factor apparent in the use of optional V-*le*. The teenaged native speakers tended to use V-*le* more freqeuently than the adult native speakers in this study.

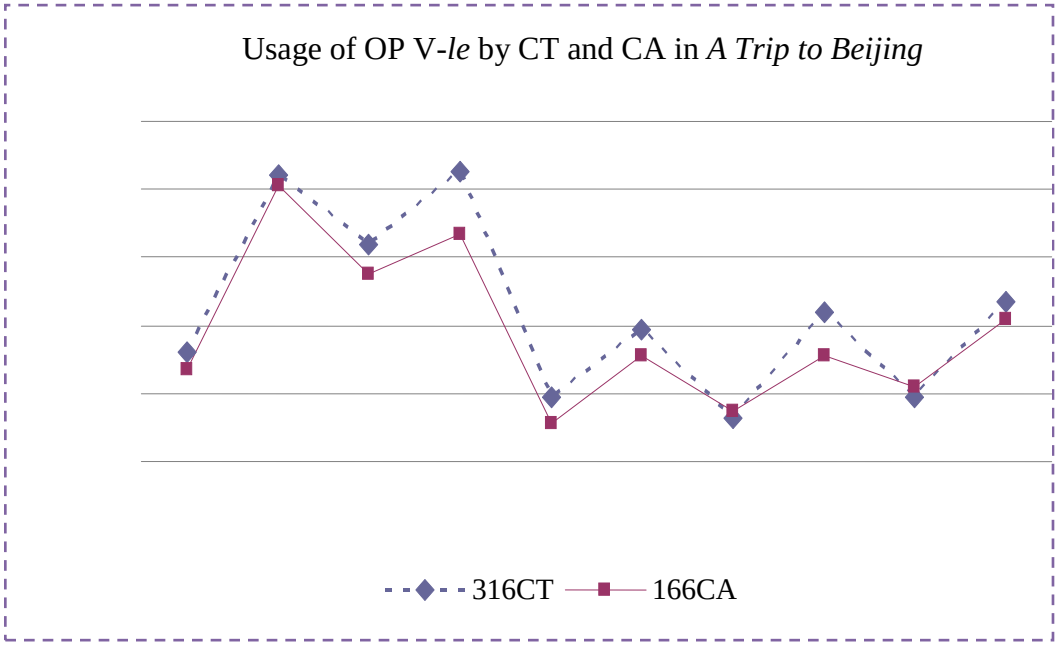

Figure 4-1
OP V-le by Chinese teenagers and Chinese adults

There are traceable patterns in the use of the OP V-*le* by the 482 native speakers when we examine the different constituents of each verbal phrase and its syntactic structure. The 3 highest percentage verb phrases with optional V-le were V14, V21, and V16. In the task, V19 (a quasi OB) + V21 and V12+V14 +V16 were a series of events in a sequence.

Table 4-7

Percent use of OP V-le by the natives with the distribution of verb types

14	83%	saw each other, then , 见了面, 然后…	**ACH [1]**as the 2nd event (not a closing statement) in a sequence
V21	79%	arrived in Beijing . 到了北京。	**ACH [2]** as the closing statement /2nd event in a sequence
V16	61%	boarded the plane…. 坐上了去北京的飞机。	**RVC[3]** as the closing statement /2nd event in a sequence
V59	45%	returned (home) 回了他北京的家。	**ACH[4]** as the closing statement in the narration
V54	39%	after putting down the luggage, we will then.. 放下了行李，就	**RVC[5]** as the 1st event in a sequence
V25	36%	(then) saw Dad (waiting for us….) …就看到了爸爸在…	**RVC[6]** as the closing statement /2nd event in a sequence
V12	30%	returned (home), … 回了波士顿的家,…	**ACH[7]**as the 1st event in a sequence
V57	20%	sat (in Dad's car) .. 坐了爸爸的车...	**ACT[8]→STA** First verb in a serial verb construction
V23	16.5 %	As soon as (we) were out the airport, (we saw at once…..) 一出了飞机场, (我们就看到…)	**ACH[9]** as the 1st event in a sequence in an *as soon as* syntactic structure
V31	14%	spoke with him 跟他说了话	**ACT[10]**

The third event on this list of OP V-le was V23 + V25, which appeared in the lower frequency zone of optional V-*le*. The fourth event did not appear in its entirety, since it was a projected event (→in future context). Logically only the first action V54 could be on the list.

Let us label V19 + V21 as Event A; V12+V14 +V16 as Event B; V23+V25 as Event C; V54+X as Event D, V57+V59 as Event E, and V30+V31 Event F for ease of discussion. The numbers in the [ ] represent the percentage use of optional V-*le* associated with that verb class, with [1] being the highest and [10] lowest. [0] indicates that the verb does not belon to the list, but needs to be metioned as part of the discourse.

Table 4-8

Components contributing to optionality

Event	Verb Number & Verb Type
Event A	V 19 + V 21
	ACC [0] + ACH [2]
	We stopped for 2 hours in Tokyo, and arrived in Beijing the next morning.
Event B	V12 + V 14 + V16
	ACH [7] + ACH [1] + RVC [3]
	I first went back home in Boston, after meeting up with mom, we got on the Beijing-bound airplane together→After going home to Boston, I met up with mom, and then we got on the Beijing-bound airplane together
Event C	V 23 + V 25
	ACH [9] + RVC [6]
	As soon as we got out of the airport, we immediately saw Dad waiting for us at the exit.
Event D	V 54
	RVC [5] + [X] (in a future context)
	We will go there right after putting down our luggage.
Event E	V 57 + V 59
	ACT [8] + ACH [4]
	…sat in Dad's car and went back to his home in Beijing
Event F	V30+ V 31
	ACT [10]
	….ran towards him and spoke with him.

In Event A, as we argued in the previous section, V19 (stop for 3 hours) should be considered as a shift ACC type, and V21 (arrive in Beijing) was a MONO-ACH verb phrase. In event B, V12 (return home in Boston) and V14 (meet up→ see face) were both MONO-ACH verbs, and V(to board→to get on and sit) was a RVC. In Event C, V23 ([as soon as we] exit …) was a MONO-ACH, and V25 (see Dad …) was a RVC. In Event D, V54 was a RVC.

When we discuss the optionality of V-*le*, we have to examine several domains including verb type, syntactic structure, time reference in the discourse, and the time expressions and conjunctions that relate several events in a sequence. For example, let us

compare Event B and Event C. If each event was composed of (ACH) + ACH + RVC verb types to form a sequence, why did V14 (ACH-meet up, see [each other's] face) have a much higher V-le usage than V23 (ACH exit, get out of …)? We propose that this was the result of (1) the adverbial expression *as soon as*, and (2) the RVC as a closing event in Event C. A sentence containing *as soon as* does not necessarily yield a past event reading. However, when a RVC is the closing event in a sequence, it usually encodes an endpoint that has already taken place unless a future time is overtly indicated. Since ACH verb phrases, in general, already encode a semantical endpoint, their perfectiveness becomes stronger when it is in the previous sequence with *as soon as*. The logical conclusion is that 73% of the native speakers in our study viewed V-*le* unnecessary in this context.

Having discussed the most significant findings, we will turn our attention to the two remaining cases: V57 (20% of V-le usage: Event E) and V31 (14% of V-le use: Event F). V57 (where 20% of the native speakers used V-le) demonstrated how native speakers could view the contour of an event from different points of view. V57 and V59 together were the last sentence (or Event E) of the narrative. The sentence was:

wo.men-jiu-yiqi- zuo[*le*]$_{v57}$-baba-de-che[*]$_{f/s58}$-hui-[(*le*)]$_{v59}$-ta-beijing-de-jia-[(*le*)]$_{s60}$

我们 就 一起坐[了]$_{v57}$ 爸爸的 车[*]$_{f/s58}$ 回[(了)]$_{v59}$ 他北京 的家 [(了)]$_{s60}$。

We-then-all <u>sat</u> $_{v57}$ in-Dad's- car$_{f/s58}$ - <u>returned</u> $_{v59}$ to-his-Beijing's-home $_{s60}$.

The corresponding English would be "So we all went back to Dad's home in Beijing in his car." When we say, "We went to Manhattan by train" in English, it is clear that the verb of the main event is "went", and "by train" functions as an adverbial indicating the means (by train, not by bus or by car) we used to go to Manhattan. For the same reason, the verb of the main event in V57+V59 was *returned*, and *in his car* is viewed as an adverbial

indicating the type of transportation they used from the airport to the father's home in Beijing. However, syntactically the word or event order in a Chinese discourse always follows the chronological order. Furthermore, the means of transportation such as "by car, by train, by airplane" are lexically expressed with the verb *to sit* followed by the mode of transportation. Going to Manhattan by train would thus be "sit- (on)-train-go-Manhattan". Unexpectedly, 20% of our native speakers considered "sit- (on)-train" as the "opening predicate" of a sequence of two events, therefore added *-le* to the verb *sit*.

V31 (Event F) was an interesting case as well. As an ACT, V31(speak: say +words) should not have V-*le* because the object is not quantized. Probably due to the very close relationship between the verb and the object, a quasi-cognate complement to the verb, (such as "say+words"→ to speak; "eat+rice"→ have a meal; "sleep +a sleep" → to sleep; "read +books" → to read), inserting a V-*le* between the ACT and its non-quantized object is used, but not favored, by the native speakers. As a result, we found only 14% of 482 native speakers chose to place a *-le* between *say* and *words.*

Based on these patterns, we can postulate the following hypotheses regarding the optionaltiy of the perfective *-le*:

(1) When an ACC is the first event in a sequence, the optionality is very low. In other words, it is quasi-obligatory (as discussed in the previous section).

(2) Due to their verb compound formation (ACT+ ACH), RVCs strongly encode the perfectiveness, therefore the perfective marker V-*le* becomes highly optional whether it is the first or the closing event of a sequence. However, V-*le* is obligatory when RVCs are syntactically positioned at the end of a single-event sentence, usually in a topic construction.

(3) ACHs favor the optional use of V-*le* when they are followed by an object (such as V23, V12 , V59 and V21). On the other hand, ACHs favor the obligatory use of V-*le* when they are followed by a quantized time expression (such as V19: ACT →ACC), since the verb type would shift from ACH to ACC. ACHs also favor the obligatory use of V-*le* when it is not followed by a complement . For example (sentences not taken from the task):

tíng huǒ chē tíng le
停 stop: 火 车 停 了
train stop -PFV
the train stopped

sǐ tā sǐ le yǐhòu huì bǎ cáichǎn juān gěi cí shàn shì yè
死 die: 他 死 了 以后 会 把 财产 捐 给 慈善 事业
he-die -PFV-after -will-BA-property-donate-give-charity
he will donate his fortune to charity after his death [he dies]

(4) ACTs, with one exception, strongly disfavor the use of V-*le* when they are not followed by a quantized object, or when they are not the first event in a sequence. The exception is when an ACT is followed by a complement that can be considered as its cognate object (such as V 31: speak+words). However, the use of V-*le* to this V-cognate Object ACT remained low in our data.

Means of transportation (go to Manhattan by [*sit in*] subway) or destination (*go/come to Manhattan* to watch a movie) are usually viewed as adverbials without the use of V-*le*. However, 20% of the 482 speakers added -*le* to *sit* (in Dad's car), interpreting it as the first event in a sequence. This is a clear example on how natives may view the contour of the event differently.

4.4.3 Setential *le*

As Figure 2 demonstrates, our participants generally did not consider the use of S *le* obligatory for the contexts found in this task. The highest percentage of OP *S le* was 52%, and the lowest 18%. Among the *7* contexts of S-*le*, the teen group (CT) and the adult group (CA) showed the same pattern of preference for 5 of them (S1, S7, S9, S28 and S48). They did not deviate significantly from those patterns for the last two contexts (S 56 and S60). Consistent with the pattern of V-*le* usage, CT and CA are very similar in their use of S *le* with CA being a more economical speaker, while CT appears to be a more careful speaker. Generally speaking, the adult native speakers were more economical in their use of S *le*, in a manner similar to their use of optional V-*le*. This may be the result of the adults being more familiar with and trained in the written style[51]. Native speakers of Chinese use aspect markers much less in writing than in speaking, and this task was given in a written format.

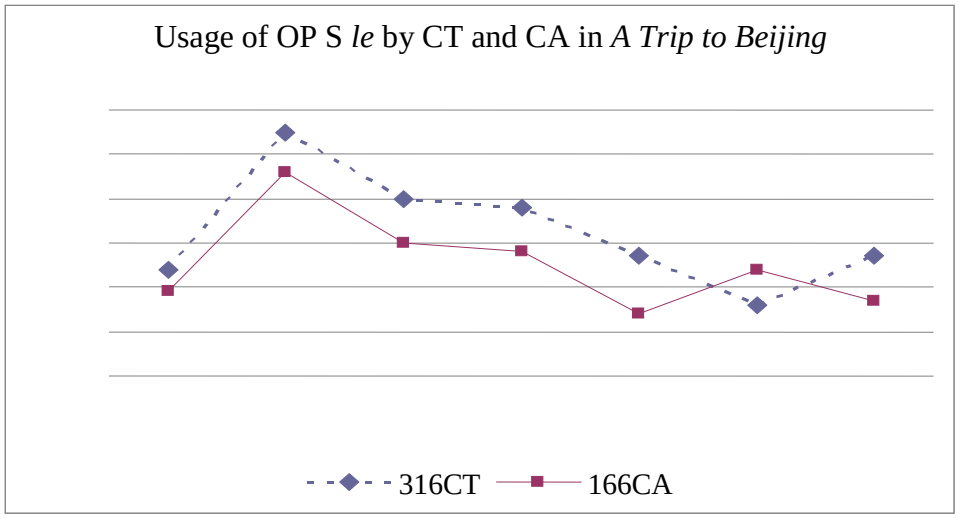

Figure 4-2
Usage of OP S le by CT & CA in A Trip to Beijing

[51] The six native teenagers serving as our controls for our learners' studies used more optional V-*le* and more optional S *le* with the same cloze task (see Table 16 and Table 17 in Chapter 5)

Table 4-9 shows that among the 7 contexts of S *le* , 2 were used to signal the change of situation and the other 5 for the inception of an event from the speaker's point of view.

Table 4-9
OP S-le with the distribution of its discourse functions

	OP S-le (ranked)	**Context for S-le**	**X/482**
S7	..so we could visit Dad [ ], 这样我们可以看看爸爸［　　］	change of situation	52%
S9	.also could see the Chinese daily life [ ]. …也可以看看中国人平常的生活情形［　］.	change of situation	36%
S28	...waiting for us [ ] at the exit. …在出口的地方等我们［ ］	inception	35%
S60	went back to his home [ ]. 回他北京的家［ ］ (last utterance of the narrative)	inception & closing statement	24%
S1	My dad worked/was working in China[ ] 去年我爸爸在中国工作［ ］	inception	22%
S48	now want to visit Tian-An-Men Square [ ]. 现在就想看天安门广场［　　］。	Inception/CRS	22%
S56	…we will go [ ] . …行李，我们就去［　　］。	Inception/CRS	18%

The top two choices for S *le* were two cases of "change of situation" :

S7- so we could see Dad [ ] (if we went to China); and

S9- so we could see the Chinese daily life [ ] (if we went to China).

The other choices were all contexts of "inception of an event from the speaker's point of view" or "currently relevant situation": S 28-…waiting for us [ ] at the exit; S60- …went back to his home in Beijing [ ], and S1: My dad was working in China last year. Usually, native speakers favor the use of S *le* with a closing statement in a discourse, but not in this case. The participants may have thought the task was only a small part of a longer narrative (as they talked about going to Tian-An-Men Square later, but the story ended at their leaving the airport for his Dad's apartment in Beijing), and did not really feel the "closing" effect. The two least favored contexts S48 and S56 were both inception/currently relevant

situations. Inception can also be considered as a "change of state in the future" and both S48 and S56 involve an immenent future event. Both S48 and S56 have adverb *jiu(4),* an untranslatable adverb performing a discourse function and expressing the speaker's temporal judgement. It can be roughly translated for S48 and S 56 as "without further delay", such as (S48): now I want see Tian-An-Men Square without further delay/now all I want to see is Tian-An-Men Square (so please do not delay the event) , and (S 56): We will go there without further delay after having put down our luggage (we will go there as soon as we put down our luggage). Similar to V-*le*, the syntactic structures exercise some degree of constraint on the choice to use S *le*.

When the event involves a "change of situation", the native speakers agreed more on the use of S *le*; but differed in how they viewed a situation as "currently relevant" (such as an inception of an event or an imminent action that is going to take place shortly).

4.5. SUMMARY OF CHAPTER 4

In this study, we found that our results disconfirmed some claims advanced by linguists and some rules prescribed by grammarians. For example, our data showed that not all aspect markers are syntactically optional as claimed by Smith in the theory of *Neutral Viewpoint* in Chinese. We also found that a small percentage of our native speakers (from 7% to 12%, depending on tokens) defied the prescriptive grammar rules reflected in commonly used textbooks of Mandarin Chinese concerning various disallowed *V-*le* contexts. Most importantly, the results of our study showed that there are in fact so-called obligatory contexts for V-le in native speakers' speech, contra Li and Thompson's claim that the usage of V-*le* depends on the speaker's point of view. In addition, the obligatory contexts for S *le* seem to be limited or non-existent, whether

denoting inception, change of state, or closure. Further investigation is necessary, particularly with tasks designed to elicit S *le,* to determine whether there are truly obligatory uses of S *le* at the discourse level.

In brief, the data and the results lead us to conclude the following:

(1) There are only 2 contexts in our data that summon the use of obligatory V-*le*: (i) A quantized ACC phrase in an idependent clause and (ii) an ACT phrase and monosyllabic ACH phrase as the first events in a sequence;

(2) There are varying degrees of occurrence of the optional non-use of V-*le* among different types of verb phrases, with RVCs carrying quantified or specified objects being the most optional, and monosyllabic ACHs with a bare NP or definite object being the least optional .

The investigation of the obligatory and the optional use of the perfective marker *-le* we have conducted leads us to conclude that, consistent with the proposals advanced by Li and Thompson (1981), only bounded predicates or events can carry the perfective marker *-le.* Our data confimed the definition of the boundedness postulated by Li and Thompson (1981, pp.185-186) that a predicate or an event is *bounded* when its direct object is quantified or specified, its verb is punctual and telic (its starting point is also its endpoint), or the event is the 1st one in a sequence.

Our data show that there is a stong relationship between the boundedness inherently encoded in the verb types and the use of V-*le*. Furthermore, the absence or presence of an object, the type of the object (quantified, specified or bare), and syntactic structure such as *as soon as*, all contribute to the likelyhood of use or non-use of V-*le*. These constraints interact differently with different types of verb categories. Based on our

data, a quantified object licenses RVCs (an ACH-type verb) to be the most optional use of V-*le* probably due to the redundancy principle. On the other hand, a quantified object only licenses ACTs to become bounded resulting in the obligatory use of V-*le* to denote the perfectivity of the ACC event.

CHAPTER 5

A TRIP TO BEIJING: THE LEARNERS

After the large survey A TRIP TO BEIJING conducted with the native speakers, we administered the same task to six English-speaking learners of L2 Chinese who had been learning the language in a non-target environment, classroom setting for 3 to 4 years. The goal of our experiment was to investigate the developmental stage of these learners after 3-4 years of exposure to the meaning, function and use of the perfective and sentential markers *–le*, and how native-like they had become with with respect to the usage of both.

Based on their curriculum of Mandarin Chinese, the sentential *–le* was the first marker to be formally introduced, at the beginning of the 1st semester of the 2nd year. The perfective marker *-le* was introduced in the 2nd semester of the 2nd year. However, all the learners had been exposed to the positive input of both *LE* since the beginning of their study, since they routinely heard classroom expressions or formulaic expressions that included either V-*le* or S *le*, such as:

shang-ke-*le*! 上课了！ attend-class-*le*→ Let's start the class now. (S *le*)

chi-fan-*le*-ma? 吃饭了吗？ eat- cooked rice- *le* –Q? → Have you eaten? (S *le*)

xie-wan-*le*-ma? 写完了吗？ write-finish-*le*-Q? → Have you finished writing? (V-*le*)

ting-dong-*le*-ma? 听懂了吗？ listen-understand-*le*-Q → Do you understand? (V-*le*)

shei-mei-jiao-gongke? 谁没交功课？ who-MEI-hand in-assignment?
→Who didn't hand in the assignment?" (V-*le*)

xia-ke-*le*! 下课了！ finish-class-le! → Class is over now! (S-*le*)

They always heard these expressions in a contextual situation, but rarely produced them themselves as output in their first year of L2 Chinese. During the 2nd and the 3rd year (and for half of them the 4th year), they started to use both *LE* occasionally in the classroom and more extensively outside the classroom during their "conversational meeting" with their teacher. Those one-on-one conversational meetings took place once every 4-6 weeks, and each session lasted from 45 to 60 minutes. The topics of those meetings were usually centered on life events such as their weekend activities, or school events such as exams, sports, arts and music, conflicts, and so on. During those conversational meetings, each learner was given ample time and opportunity to converse without the burden of being assessed or scored. With the help of their teacher, they usually could engage in a satisfactory conversation and used V-*le* and S *le* when necessary. The use of V-*le* was more frequent in this type of conversation which was usually recounting events that took place in the recent past.

The six learners had been exposed to various aspect markers through both form-focused and form-meaning mapping instruction over three to four years. The "Trip to Beijing" task was intended to measure the level of their inter-linguistic competence in the use of V-*le* and S *le* as compared to the use of those markers by the native speakers. This task also helped to depict and to analyze the learner's characteristics in their acquisition of V-*le* and S *le* at different developmental stages.

5.1 RESEARCH QUESTIONS

This study focused on how the adolescent learners of L2 Chinese use V-*le* and S *le* after three years of instruction in a non-target language environment, and specifically:

(1) What are L2 Chinese learners' patterns of use of V-*le* after the initial developmental stages?

(2) How do learners of L2 Chinese instantiate optionality for the use of V-*le* in written and spoken discourse?

(3) How do learners of L2 Chinese use the sentential *le* in their discourse?

5.2 METHODS

5.2.1 Participants

We had two groups of participants, an experimental and a control group. The experimental group consisted of the six learners of Chinese who were enrolled in a Chinese language program since 9th grade. When this task was administered, three of them (Group 1: J, C, B) were in their 4th year of Chinese, and the other three (Group 2: P M, S) were in their 3rd year. All six learners were born in the United States with English as their first language. All classes met four times a week during the academic year, resulting in about 100 hours of instruction per academic year. At the time of our research, the Group 1 learners had about 400 hours of instruction and Group 2 learners had about 300 hours of instruction.

The participants in our control group were gender and age matched with the six learners of our experimental group. They were all high school students from Nanjing, an important city with a reputable standard of education in China. The participants of our control group all spoke and wrote standard Mandarin Chinese. Most residents of Nanjing, just like the residents in other regions of China, speak their local dialect at home, but use Mandarin Chinese as a common language at school and public places. Unlike Cantonese

or Fujianese, the grammar of Nanjing dialect does not differ much from that of Mandarin Chinese, and all aspect markers and sentential *le* are commonly used.

5.2.2 Data collection

The data were collected in two different locations at two different time periods using the same method and procedures. The control group's data were collected in Nanjing, and the experimental group's data in the Unites States. Both groups participated in the same cloze test the native speakers used in the large survey reported in Chapter 3. However, in order to facilitate the learners' comprehension of the text, some characters deemed too difficult for them to read were labeled with Pinyin, and some vocabulary that was new to them was accompanied with an English translation. Similar to the natives in our large survey, both groups completed the test as a pencil-and-paper task.

5.2.3 Task design

We used the same task administered to the natives reported in Chapter 3 (3.2.3). A detailed distribution of verb classes for each obligatory V-*le*, optional V-*le* and disallowed *V-*le* is reported in Appendices 4, 5 and 6.

5.2.4 Coding criteria

As we have indicated earlier, the large survey, "A Trip to Beijing",was conducted to determine the obligatory and optional contexts for both V-*le* and S *le* in the actual language use among the native speakers. We know now from the results obtained in Chapter 3 that, there were 5 obligatory V-*le*, 10 optional V-*le*, 7 optional S *le*, 15 *V-*le*, and 23 *S *le* reported from that task.

The coding criteria for the learners and the control group were based on the results of our large survey. The 5 tokens of obligatory V-*le* were V19, V40, V42, V44 and V49; the10 tokens of optional V-*le* were V12, V14, V16, V21, V23, V25, V31, V54, V57 and V59; and the 7 tokens of optional S *le* were S1, S7, S9, S28, S48, S56 and S60. There was no context of obligatory S *le*. The remaining tokens were 16 cases of disallowed V-*le* and 22 of disallowed S *le*.

5.2.5 Coding conventions

We used the same coding conventions described in Chapter 3. For the sake of convenience, we repeat our conventions below:

EXP: experimental group

CONT: control group

CT: Chinese teen ager group

X: # of answers

OB V-*le*: the perfective marker –*le* is required (obligatory for V-*le*)

OP V-*le* le: the perfective marker –*le* can be dropped or used (optional for V-*le*)

OB S *le*: the sentential *le* is required (obligatory context for S *le*)

OP S *le*: the sentential *le* can be dropped or used (optional context for S *le*)

*V-*le*: the perfective marker V- *le* is disallowed

*S *le*: the perfective marker S *le* is disallowed

[-*le*]: as in V42 *eat*-[*le*] *3 meals* (V-*le* is obligatory)

[ ]: as in V14 *see* [ ] *each other* or S7 *so we could visit Dad [ ]* (V-*le*/S *le* is optional)

[*] as in V2 *decide* [*] or S15 *saw each other* [*] (V-*le*/S *le* is disallowed)

5.3 RESULTS

In terms of overall scores, the six learners performed best on obligatory V-*le* with a correct rate of 97%. They oversupplied more *V-*le* (oversupply rate: 34%) than * S *le* (oversupply rate: 19%). They used more V-*le* in optional contexts (65%) than the control group (55%) and the Chinese teen group (45%). The control group's scores, due to its small sample size, may not always be representative of the prototypical native performance. We therefore included the scores of the 316 teens from our large survey as a further reference for our discussion. The learners also used more *S le* in optional contexts (43%) than both the control group (31%) and Chinese teen group (32%). Following are the details of the percentage of use for all 5 categories by experimental, control and the 316-teen groups.

Table 5-1
Usage percent per category and per group

	Experimental	Control	316 CTeens
OB V-*le* (5)	97%	100%	98%
* V-*le* (15)	66%	99%	98%
* S *le* (23)	81%	100%	98.5%
OP V-*le* (10)	65%	55%	45%
OP S *le* (7)	43%	31%	32%

5.3.1 Obligatory V-*le*

We designed the task with 7 tokens of obligatory V-*le* (V14, V19, V21, V40, V42, V44, and V49) in mind, but the native data defied our assumptions, shortening our list of obligatory V-*le* from 7 to 5.

As reported in Chapter 3, we determined that obligatory context and optional context based on the results of the combined native data, establishing the standard of 95%

use to reflect agreement. According to the ranked percentage of use, 96% of 482 natives added -*le* to V19 (stop-le for two hours), making it the 5th most frequent verb with the perfective marker -*le* while 83% of them added -*le* to V21 (see-le each other, then…), making it the 6th most frequent. We thought that if 17% of native speakers judged the use of -*le* to be optional, and if there was a difference of 13% percent between the 5th and the 6th ranked verbs, there was enough evidence to consider V21 as optional V-*le* context. We held the same reasoning for V14 (arrived in Beijing) which had a 79% use of -*le* by the 482 native speakers.

The six learners behaved very much like the natives in obligatory V-*le* contexts. The only exception was V19 where a learner from a lower proficiency group did not add -*le* to an achievement verb (stop) turned into accomplishment-like (stop-le for two hours).

Table 5-2
Use of OB V-le Usage by 3 groups

	V-*le* OB (ranked based on CT)		EXP (6)	CONT (6)	CT (316)
V42	eat-*le* 3 meals	吃了三顿饭	100%	100%	99%
V44	watch-*le* 2 movies.	看了两部电影。	100%	100%	99%
V40	sleep-*le* for 5 hours	睡了五个钟头	100%	100%	99%
V19	stop-*le* for 2 hours,	停了两个钟头,	83%	100%	98%
V49	hear-*le* what I said then	听了我的话就…	100%	100%	97%

5.3.2 Optional V-*le*

Because the optional use of V-*le* is determined in a large part by the viewpoint of each individual speaker, and because of the small sample size of our control group, we ranked the percent use of OP V-*le* according to the Chinese teen group's score in the large

survey to avoid any unintended idiosyncratic bias. If we only took the Chinese teen group's data as our point of reference, our reasoning for defining obligatory context versus optional context discussed above still held true as 84% of them added -*le* to V14 and 85% added -*le* to V21. Both numbers were still far off from our cutoff line of 95%. Based on this reasoning and our discussion in 4.3.1., we classified both both V14 (see-*le* each other, then…) and V21 (…arrived in Beijing.) as optional contexts, even though all of the six native speakers of the control group opted for the use of -*le.*

If we refer to Table 4-7 and Figure 4-1, we would find that the 166 Chinese adults and the 316 Chinese teens behaved similarly in terms of the use of OP V-*le*, in spite of its subjectivity and the language habits of each speaker. This uniformity further supported our choice to use the larger sample's score as the point of comparison this discussion.

Table 5-3
OP V-le Usage Percent per Token & Group in A Trip to Beijing

	V-*le* OP (ranked based on CT)	EXP (6)	CONT (6)	CT (316)
V21	arrive [*le*] in Beijing . 到 [了] 北京。	100%	100%	85%
V14	see [*le*] each other, then , 见 [了] 面, 然后…	67%	100%	84%
V16	board [*le*] the plane 坐上 [了] 去北京的飞机	83%	67%	64%
V59	return [*le*] (home) 回 [了] 他北京的家	33%	67%	47%
V54	(after) put [*le*] down the luggage 放下 [了] 行李	67%	50%	44%
V25	see [*le*] Dad 看到 [了] 爸爸	67%	50%	39%
V12	return [*le*] (home) 回 [了] 波士顿的家	50%	17%	32%
V23	as soon as … out [*le*] the airport 一出 [了] 飞机场	50%	33%	19%
V57	sit [*le*] (in Dad's car) 坐 [了] 爸爸的车...	50%	17%	19%
V31	speak [*le*] with him 跟他说[了]话	67%	67%	13%

5.3.3 Optional S *le*

Table 5-4
OP S-le Usage Percent per Token & Group in A Trip to Beijing

	S *le* OP (ranked based on CT)	EXP (6)	CONT (6)	CT (316)
S7	..so we could visit Dad [*le*]， 这样我们可以看看爸爸 [了] ，	33%	67%	55%
S9	also could see the Chinese daily life [*le*]. 也可以看看中国人平常的生活情形 [了].	17%	50%	40%
S28	...wait for us [*le*] at the exit[52]. …在出口的地方等我们 [了]。	17%	17%	38%
S48	now immediately want to visit TianAnMen Square [*le*], 现在就想看天安门广场 [了]。	50%	33%	27%
S60[53]	went back to his home [*le*]. 回他北京的家[了]。	17%	17%	27%
S1	My dad worked/was working in China [*le*], 去年我爸爸在中国工作[了],	33%	33%	24%
S56	(After putting down) the luggage, we will then go [*le*]. …行李，我们就去 [了] 。	17%	0%	16%

Similar to the case of obligatory V-*le*, we designed the task with a token of obligatory S *le* in mind (S60, the last blank /space in our narrative, serving the function of a closure for the entire narrative.) Again, the 482 natives defied our assumptions in this case. Only 24% of them added S *le* to the last sentence, making it an optional context instead of an obligatory context for our scoring criteria. Interestingly, our six learners and the six participants of the control group behaved similarly with S60, with one participant from each group added S-*le* to the last blank. We cannot say with confidence that the learners behaved natively in terms of the concept of closure since these results could reflect the phenomenon of "underproduction" which is common, as reported in literature (Wen, 1995; Wen,1997: Duff & Li, 2002), at relatively early stages of acquisition on S *le*. However, unlike the case of obligatory V-*le*, the native speakers from the control group behaved

[52] See footnote 8 in Chapter 3.
[53] This is the last utterance of the narrative, already specified in footnote 9.

similarly to both the Chinese adult group and the Chinese teen group in the larger survey in terms of the choice of "closure".

On the other hand, we did not design our task with any optional S *le* in mind. Yet, the native speakers defied, for the third time, our assumptions by adding S *le* to several contexts. Without the native speakers' data, we, and probably many other researchers, would have scored these S *le* uses as oversuppliances in disallowed contexts.

5.3.4 Disallowed *V-*le***

Table 5-5
**V-le Percent per Token & Group in A Trip to Beijing*

	* V-*le*		EXP (6)	CONT (6)	CT (316)
V33	Dad asked us…	爸爸问 [ ] 我们	83%	0%	8%
V51	…then said : OK…	就说 [ ]	67%	0%	1%
V36	I told him	我告诉 [ ]他	67%	0%	15%
V10	took [ ] the train to	坐[ ]火车回….	67%	0%	6%
V39	I said	我说 [ ]	67%	0%	1%
V2	decided	决定 [ ]	50%	0%	10%
V5	could go	可以去 [ ]	33%	0%	0%
V27	waiting [ ] for us	等[ ] 我们	33%	17%	0%
V30	ran over	跑过去 [ ]…	33%	17%	0%
V46	all I want [ ] now	我现在就想 [ ]	33%	0%	0%
V17	go [ ] to Beijing	去[ ] 北京的飞机	17%	0%	1%
V3	to go	去[ ]	17%	0%	1%
V6	could visit [ ] Dad	可以去看看[ ] 爸爸	0%	0%	0%
V8	could see [ ]	可以去看看[ ]	0%	0%	0%
V47	all I want to see [ ]now	我现在就想看 [ ]	0%	0%	0%
V52	let's go [ ] home first	我们先回 [ ]家	0%	0%	0%

Because the learners were prone to making errors in disallowed contexts for *V-*le*, we ranked the error rate in usage based on the learners' performance for ease of discussion.

It is surprising to see that a single participant from the native group added V-*le* to V27 and V30 while none of the 316 Chinese teens thought V-*le* was necessary in these two contexts. We think this type of "error" by a well-educated native speaker is probably due to stylistic variation, marked usage or an idiosyncratic viewpoint of the perfective aspect.

5.3.5. Disallowed context for *S le

For the same reasons, we ranked the error rate as a percentage for *S *le* according to the learners' performance for ease of discussion.

Table 5-6
*Percent use of *S le per Token per Group*

	* S *le*		EXP X/6	CONT X/6	CT X/316
S29	I was happy [ ],	很高兴 [ ] ,	67%	0%	0%
S53	let's go home first	我们先回家[ ]吧	50%	0%	0%
S24	as soon as we got out of the airport [ ]	一出了飞机场 [ ],	50%	0%	0%
S15	saw each other [ ]	见面 [ ]	17%	0%	4%
S4	Travel [ ] in China,	去中国旅行 [ ],	17%	0%	4%
S11	took train [ ]and…	坐火车 [ ]	17%	0%	0%
S18	..boarded the plane to Beijing [ ].	坐上去北京的飞机 [ ]	17%	0%	3%
S20	stopped for 2 hours [ ]	停了两个钟头 [ ] ,	17%	0%	0%
S26	saw Dad [ ] waiting	就看到爸爸[ ] …等…	17%	0%	0%
S32	…ran to him and spoke with him.	跑过去跟他说话[ ]	17%	0%	3%
S35	whether we were hungry….	饿不饿 [ ]…	17%	0%	5%
S13	went back home [ ] ,	回波士顿的家 [ ],	0%	0%	1%
S22	…arrived in Beijing [ ].	六点到了北京 [ ].	0%	0%	4%
S34	whether we were tired [ ] ,	我们累不累 [ ],	0%	0%	2%
S37	I was not tired [ ]	我不累 [ ]	0%	0%	1%

Table 5-6 (continued)

*Percent use of *S le per Token per Group*

	* S *le*		EXP X/6	CONT X/6	CT X/316
S38	nor hungry [ ].	也不饿 [ ]。	0%	0%	1%
S41	slept for 5 hours [ ]	睡了五个钟头的觉 [ ]	0%	0%	2%
S43	ate three meals [ ]	吃了三顿饭 [ ]	0%	0%	1%
S45	watched 2 movies [ ]	看了两部电影 [ ]	0%	0%	0%
S50	heard my words [ ]....	听了我的话 [ ]...	0%	0%	0%
S55	..go after putting down the luggage [ ] .放下[了]行李[ ]就去。		0%	0%	1%
S58	sat in Dad's car [ ] ...	坐爸爸的车 [ ]...	0%	0%	0%

5.4 DISCUSSION

5.4.1 Obligarory V-*le*

The six learners behaved most natively with the obligatory contexts of V-*le* in this task. Except for a single case, which involved a ACH + duration verbal phrase as the 1st event in a sequence, all 6 learners (3 from a more advanced group and 3 from an intermediate group) judged that ACC phrases and ACT phrases as the 1st event in a sequence need to carry V-*le* to signal the perfectiveness needed for the discourse.

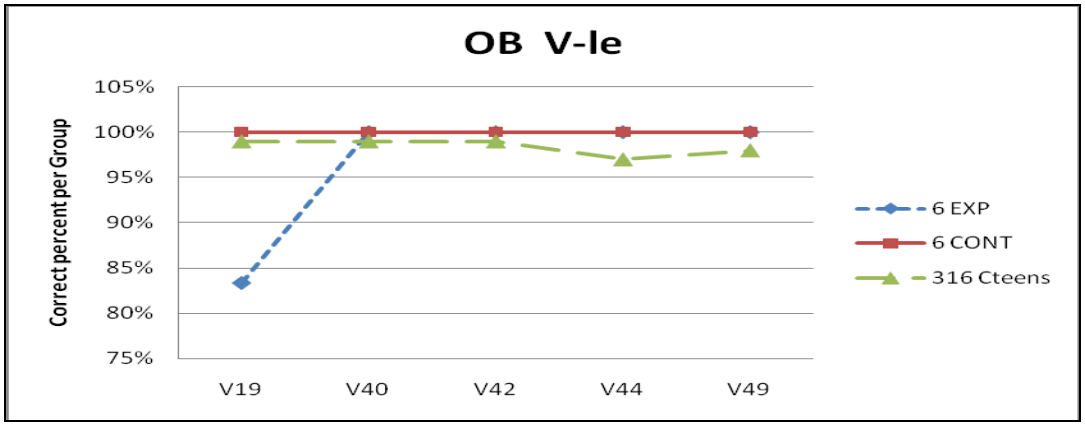

Figure 5-1

Correct usage of OB V-le in A Trip to Beijing

Figure 5-1 shows the six participants from the control group also considered V21 (*arrive*-Beijing) and V14 (*see* each ['s face] before boarding the Beijing-bound plane) as obligatory. Without the results from the large survey (316 teens and 166 adults from the same region-Nanjing), we would have concluded that the learners behaved differently from the natives for V14 as well. Instead, it appears that some native speakers from the large survey also considered V-*le* to be optional for V14. Thus, we can conclude that in terms of the obligatory use of V-*le*, the learners performed in line with native speakers for this task.

5.4.2 Optional V-*le*

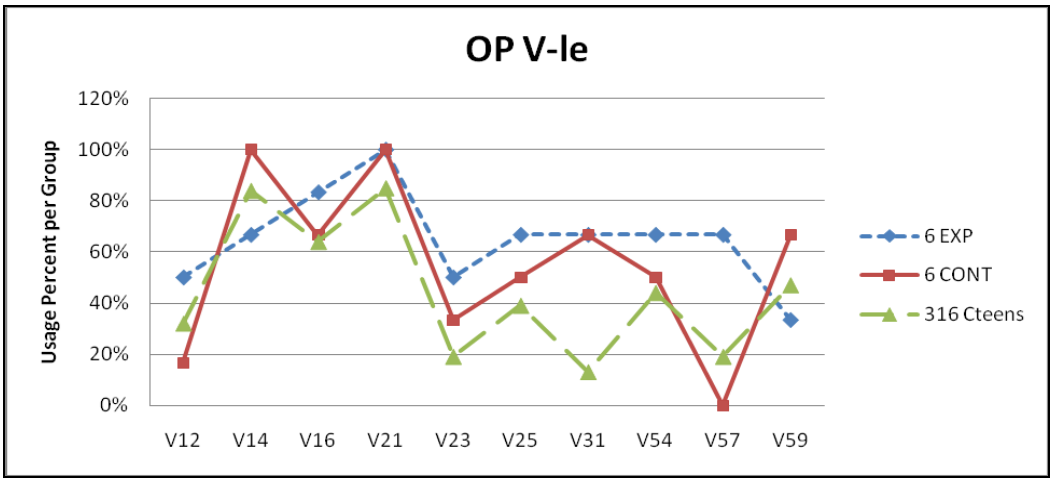

Figure 5-2
Usage of OP V-le in A Trip to Beijing

Similar to the control group, the six learners thought that V21 (*arrive* Beijing) in the last utterance of a sentence should carry V-*le* to indicate the endpoint of the event. We noticed that the learners viewed ACH verbs differently according to the syntactical structures in which they were found. Some of the learners tended to drop V-*le* when the ACH verbs were the 1st event in a sequence, such as in V19 (*stop* for 2 hours, then…) and V 14 (*see* each ['s face] before boarding the Beijing-bound plane), but marked V-*le* when

the ACH verb was the last event of a sequence, such as in V21(*arrive* Beijing). This is different from the result we found with the large group where 15% of them thought V-*le* was not necessary. We attribute this difference to the fact that the 6 participants in the control group appered to be careful speakers and had above average proficiency in Mandarin Chinese when compared to their peers.

Generally speaking, the learners tended to use more V-*le* in optional contexts than the control group, and the control group used more V-*le* than the teen group. The only verb phrase that the learners used differently in this pattern was V59 (*return* to his home in Beijing). Only 2 learners attached V-*le* to the verb *return*. This was probably due to the fact that the learners did not consider that "returning to Dad's home in Beijing" was the 2nd event in a sequence, and they behaved according to their usual pattern.

5.4.3 Oversuppliance of *V-*le*

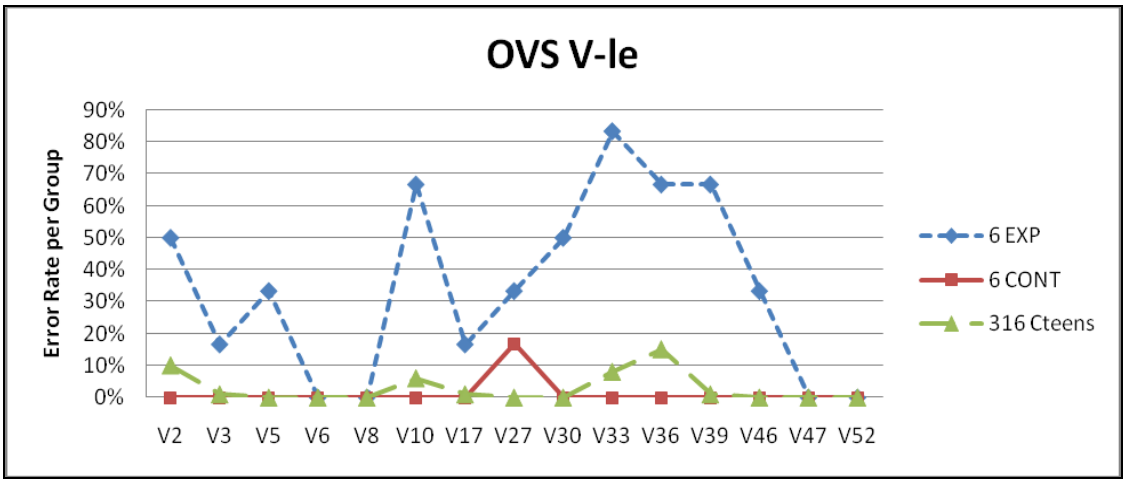

Figure 5-3
*Oversuppliance of *V-le in A Trip to Beijing*

Compared to the native speakers in both groups, the learners oversupplied V-*le* in 13 out of 15 contexts. They used more V-*le* in optional contexts and they oversupplied V-*le* in disallowed contexts. Taking these two patterns in consideration, and comparing

them to their performance with V-*le* in obligatory contexts, it seems that at these low to intermediate stages of acquisition, the learners exibited the opposite behavior of *avoidance*, an interlanguage behavior reflected in L2 literature. They know when V-*le* should be supplied, but are not sure when it is optional or when it is disallowed.

There were three situations where leaners tended to oversupply *V-*le*:

(1) ***"Say Verbs"***

Verbs that belong to the category of *say, tell, inform, ask* should not carry V-*le* in Chinese when they are followed by quotation marks or indirect speech. In other words, when "say verbs" are used to describe someone's utterance or speech, they do not have the perfective aspect, thus are not licensed to have V-*le*. The following examples should clarify this difference:

1) ta- shuo-ta- hen- lei. /ta-shuo: "wo-hen-lei /wo-lei-le"
he –say- he –(very)-tired / he –say – " I –(very)-tired/ I- tired –(S-le)
He said that he was tired. /He said: " I am tired."

2) ta - zhi- shuo- le-liang-ge-zi
he –only-say/speak -PFV -2- CL-character
He only spoke 2 words.

Shuo-说 could mean "to say" or "to speak" in Chinese. Since this point was not taught explicitly in the classroom , the result was that the majority of learners added V-*le* to the "say verbs" in this task, such as in V33, V36 and V39.

(2) ***Means of transportation or destination before the main verb***

The 1st position verb is not always the 1st event in a sequence in Chinese. This is especially true when the 1st position verbs are verbs indicating the mode of

transportation (including walking) or verbs "to go" or "to come" (with or without a destination as its complement). Means of getting to a place or the fact to go to a destination to accomplish an event are considered adverbials in Chinese rather than the 1st event in a sequence. Unlike "say verbs", this was taught explicitly in classroom, but still the majority of learners made this type of error with V10 (sit in train to return → return to …*by train*).

(3) *Some psych verbs such as decide*

While the learners knew that optative verbs such as *xiang* 想 (to consider, to want) *neng* 能 (can, be able to), *keyi* 可以 (can, to be allowed to), *hui* 会 (will, know how to) do not carry V-*le* as they cannot fulfill the boundedness condition to be perfective, they tended to forget other psych verbs such as *decide* do not carry V-*le* for the same reason. Half of the learners (2 from lower proficiency group and 1 from higher proficiency group) made this type of mistake.

5.4.4 Optional S *le*

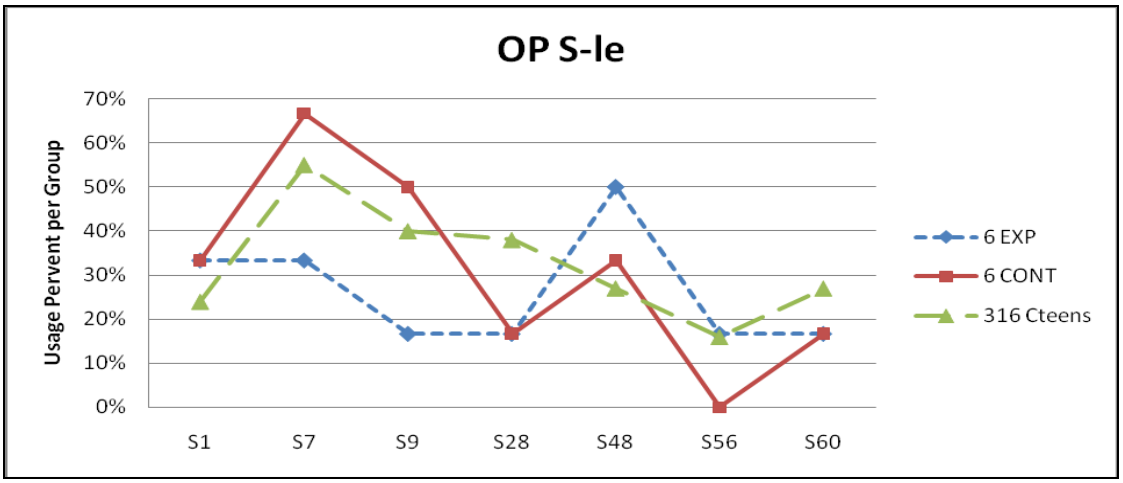

Figure 5-4
The usage of OP S le in A Trip to Beijing

Out of the 7 contexts of S *le* , the learners behaved similarly to the control group in 3 contexts (S1, S28 and S60), used less *S le* in 2 contexts (S7 and S9), and used more S *le* in other 2 contexts (S48 and S56).

S7 and S9 were S *le* indicating change of state, and S48 and S56 were S *le* indicating imminent inception. S28, S60 and S1 were also S *le* indicating inception which was relevant at to the reference time. The 316 teens also marked S7 and S9 (both change of status) more than other S *le* contexts, indicating that the native speakers agreed more on the S *le* change of status than S *le* inception. This suggested that the learners generally did not view those contexts as change of status that required S *le*.

5.4.5 Oversuppliance with *S *le*

There were 23 contexts of *S *le* in this task. The 6 learners oversupplied *S *le* in certain contexts, but they geneally did well in null marker S *le*. All of them scored 100% for 8 out of 23 contexts. Only 1 out of 6 learners oversupplied S *le* in 10 out of 23 contexts. The number of the problematic ones were only 5 out of 23: S29, S51, S23, S53, and S15.

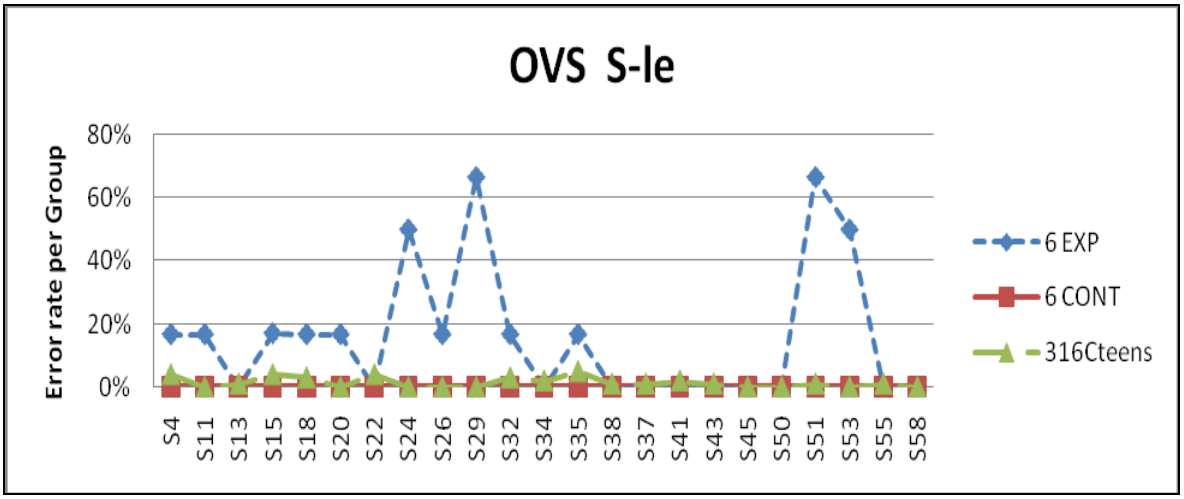

Figure 5-5
*Error rate of oversuppliance with *S le in A Trip to Beijing*

The learners may have thought of S29 (I was happy [ ] —when I saw Dad), S53 (Let's go home first [ ]) and S 23 (as soon as we get out of the airport…) as three cases where an inception of a new event started.

S51 was a typical "say verb" error. In fact, this oversuppliance context could also be considered as a V-*le* oversupply as there was no complement after the verb "to say".

Two learners from the lower proficiency group supplied S *le* to S15 (see each other [ ]). This is probably due to their lack of knowledge of how the vocabulary *jian-mian* 见面 (see-face: to meet) was formed in the first place. In fact, all 6 learners thought that a *–le* was necessary. 4 of them placed *–le* after the verb "to see", and the other two placed it after the noun "face'. If the 2 learners understood mistakenly that *jian-mian* 见面 (see-face: to meet) was a verb + verb instead of verb + N, it was then understandable when they misplaced *–le* after the noun "face".

5.4.6 Learners' group and individual profiles

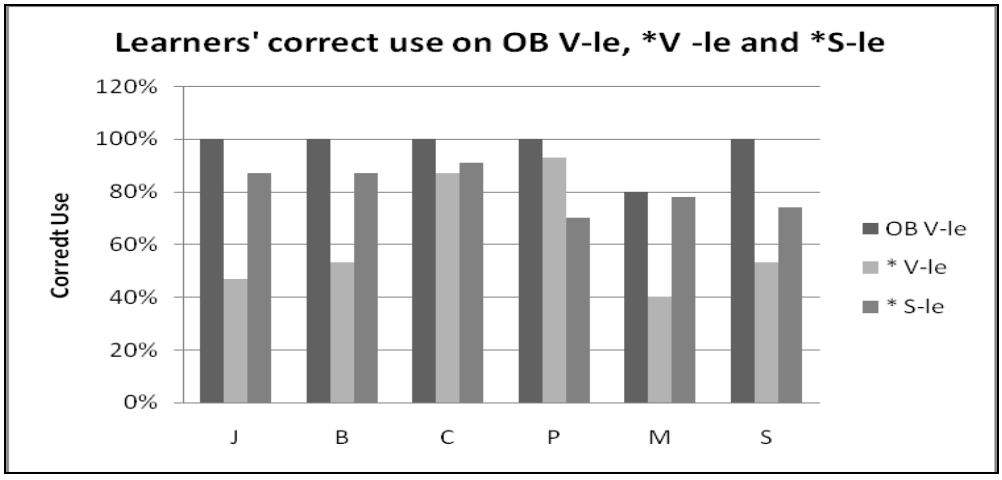

Figure 5-6
*Learners' correct use of OB V-le, * V-le and *S le*

In terms of correct suppliance (obligatory V-*le* and *V-*le*/ *S *le*), the six learners behaved about the same for obligatory V-*le*, and four learners performed similarly on *V-*le*, two from each group. However, the higher proficiency group (J, B, C) performed better overall in * S *le* than the lower proficiency group (P, M, S).

There were no clear patterns of how the learners showed their preferences on optional V-*le* and optional S *le* according to their proficiency levels. However, the learners, as a group, tended to use more optional V-*le* than optional S *le*.

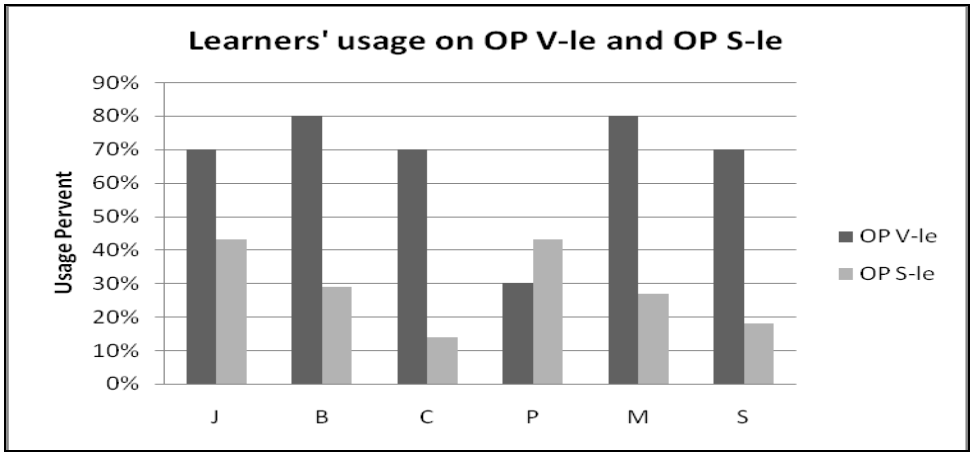

Figure 5-7
Learners' usage of OP V-le and OP S le

Individually, except for P, the learners exhibited the same tendency in all categories. They performed well on V-*le* OB and tended to use more optional V-*le* than optional S *le*. They also had a higher error rate with V-*le* than with S *le*.

Within the higher proficiency group, C was the most advanced of the 6 learners, judging from his error rates in applying V-*le* and S *le*. P was a special case. As P tended to be very economical on V-*le* (30% vs. 70-80% on OP V-le), his error rate on *V-*le* was surprisingly low. P's scores in other tasks need further review before making any conclusions about his acquisition of V-*le* and S *le*.

Table 5-7
Individual learner's correct use of V-le and S le

	HIGHER PROFICIENY GROUP			LOWER PROFICIENCY GROUP		
	J	B	C	P	M	S
OB V-*le*	100%	100%	100%	100%	80%	100%
OP V-*le*	70%	80%	70%	30%	80%	70%
OP S *le*	43%	29%	14%	43%	27%	18%
* V-*le*	47%	53%	87%	93%	40%	53%
* S *le*	87%	87 %	91%	70%	78%	74%

5.5 SUMMARY OF CHAPTER 5

In this highly controlled task, five learners out of six performed in line with native speakers for the use of obligatory V-*le*. This suggests that the majority of the learners in our study had acquired the use of the perfective marker in obligatory contexts, the most salient and fundamental domain of perfectivity that needs a convert marker. As a group, they tended to use more optional V-*le* than optional S *le*, though their preference for optional V-*le* was consistent with that of the control group. Again, as a group, the learners tended to make more errors with *V-*le* than with *S *le* in disallowed contexts. One of the reasons for this tendency may be the higher frequency of V-*le* that occurs in natural speech compared to that of S *le*. The other reason may be the numerous syntactical, prosodic and semantic constraints and interactions surrounding V-*le*, which are far more than the pragmatic constraints associated with S *le* at the discourse level.

Combining all these facts, we believe that, at the post-initial stage both groups of learners have acquired a solid knowledge about the obligatory usage of V-*le*, but had not

yet grasped the full scope of the non-perfectiveness. This was evidenced in their use of certain predicates and in direct or indirect speech associated with some *cognitive* and *dispositional* verbs. Growth in competence in the use of V-*le* is incremental and parallel with the advancement of learners' global linguistic knowledge. In native speech, V-*le* is often used in lexically and syntactically complex structures such as in the topic prominent *ba sentence*, the passive voice *bei* sentence and in complex directional complements. The ultimate attainment of the use of V-*le* cannot be achieved before the learners have internalized a large repertoire of vocabulary within a relatively comprehensive system of syntactic structures.

CHAPTER 6

THE OLD MAN AND HIS HORSES

The task "A Trip to Beijing" was a combined grammaticality judgment and production task in which we asked the participants to add V-*le* and S *le* when they felt it was necessary according to the context. It was administered as a highly controlled reading-writing task. As we pointed out in our previous discussion, this type of task might induce the participants, whether native or non-native, to overproduce or underproduce the target form or structure as they were aware of the goal of the experiment. We therefore assumed that the results from a less controlled and different mode of task would allow us to assess and to compare, side by side, the L2 Chinese learners overall performance with those of the native speakers. With such an assumption in mind, we designed and administered an oral task "The Old Man and His Horses", which we will discuss in this chapter.

6.1 METHODS

6.1.1 Participants

Since we wanted to compare the production of the target form V-*le* and S *le* by the learners and the native speakers in different modes of task, the same set of six native speakers and the six L2 Chinese learners who served as the control and experimental group in the task, "A Trip to Beijing", participated in this oral task.

6.1.2 Task Design and Data Collection

In this oral task, we asked the participants to retell a story. Before the task, all participants, including the native speakers, were provided with a printed English version of

the story along with an illustration (see Appendix 7). "The Old Man and His Horses" is a popular Chinese fable with a Taoist/Zen Buddhist flavor. The idiomatic expression "sài-wēng-shī-mǎ (塞翁失马)〔border-old man-lost-horse(s)]", which was derived from this fable, is known to almost all Chinese native speakers. While the six participants of the control group all knew to some extent the main points of the story, the six learners had never heard the story before the task.

The six learners received the story two days before the task so they could review relevant vocabulary in a bilingual dictionary. They also had the opportunity to discuss the story briefly in the classroom the day before the task. The six native speakers received the English version of the story half an hour before the task to remind them of the key points so that they could be more consistent in their recollections.

All of the oral productions were recorded. The six native speakers told the story individually to this researcher, and the six learners recorded their story individually in a computer lab. It would have been ideal if the data were collected the same way, but no computer lab was available when the native speakers' data were collected.

6.1.3 Conventions and Criteria

Coding Conventions of the Transcripts

The recorded 12 oral productions were first transcribed into characters (see Appendix 8) before being coded into the following categories with the related abbreviation noted in parentheses:

*Obligatory V-le, Optional V-le, and Disallowed *V-le*

a) as the main verb in an event

1. V-*le* with a state verb (STA)
2. V-*le* with an activity verb (ACT)
3. V-*le* with an accomplishment verb (ACC)
4. V-*le* with an achievement verb (ACH)
5. V-*le* with a resultative verb compound (RVC)

b) as the first action in a sequence (FES)

c) disallowed with optative verbs (OPV)

d) in negative form (mei)

S le

a) as the inception of a new event (INC)

b) indicating a change of state (COS)

Scoring Criteria

The criteria for obligatory use of V-*le* were based on the results of the large survey, "A Trip to Beijing", reported in Chapter 3 and summarized below for the sake of convenience:

(1) Accomplishment verbs (activity verbs + quantified objects);

(2) Activity verbs as the first event in a sequence;

(3) Achievement verbs + quantified time expressions (→accomplishment verbs);

(4) RVCs (ACT + ACH) when they are not the first events in a sequence; and

(5) Negative forms with *mei*-V-(O)

Scoring Conventions

The numbers 1, 2 and the symbols √ and ⁄ were used to represent the following:

1= correct usage in an obligatory context or disallowed context

2= wrong usage (oversupply when it is disallowed or omission when it is obligatory)

√ = used V-*le* in an optional context

⁄ = omitted V-*le* in an optional context

Not marked = when the verb was not used by the participant

6.2 RESULTS

In this section, we report the detailed results of this oral production task in the following categories: the use of obligatory V-*le* in 6.2.1; the use of obligatory *mei*-V in 6.2.2; the use and non-use of optional V-*le* in 6.2.3; the correct and incorrect use of disallowed V-*le* in 6.2.4; and the use of S *le* in 6.2.5. As this is a qualitative study focusing on the use and non-use of V-*le* and S *le* in discourse, each utterance produced by the native speakers and learners was transcribed into Chinese characters and accompanied by its translation in English in order to examine the use and non-use of V-*le* and S *le* in different situation types and in different speech contexts. The results showed the differences and similarities between the two groups as well as the variations of usage within each of the groups, in terms of the verb choices and the speech constructs, which have a direct impact on the use of both V-*le* and S *le*.

6.2.1 The use of V-*le* in obligatory context by the learners and the natives

Table 6-1
The use of obligatory V-le by the learners and the native speakers

OB V-*le* in utterances		*J*	*C*	*B*	*P*	*M*	*S*	L	Liu	S	X	Zh	Z
Telic-State	住[54]了一个老人 lived an old man			1				1					
ACT	养[55]了一匹马 raised a horse									1			
	听了别人的话 heard others' words												1
	说了一些话 said some words							1					1
ACC	马跑了[56]出去 the horse ran out										1		
	带了两匹野马回来 brought 2 wild horses back							1	1	1	1	1	
	他留了下来 he stayed behind										1		
ACH	…不见了 disappeared							1		1	1	1	1
	马丢了 lost the horse							1	1		1		
	马跑[57]了 the horse ran away									1			
	马失踪了 the horse disappeared											1	
	到了…的时候 when the moment of …arrived									1			
	人死了很多了 many people died									1			
	都死了 all died							1	1				1
	腿瘸了 became crippled											1	
	腿断了 broke the leg									1			
	邻人又来了 the neighbors came again					2							
	一个战争来了 a war came/arrived			1									

[54] In this case, "to live" is what Li P.(1990) labeled as "mixed telic-stative verb", such as "to put on/to wear".
[55] Same as (50).
[56] In this case "to run out" is classified as *ACC* because the speaker attached -*le* after "to run", not after "to run out", and "out" denotes the spatial endpoint on the activity verb "to run".
[57] The verb "to run" was used here as meaning "to run away", just as we might urge someone to "Run, run…"

Table 6-1 (continued)
The use of obligatory V-le by the learners and the native speakers

OB V-*le* in utterances		*J*	*C*	*B*	*P*	*M*	*S*	L	Liu	S	X	Zh	Z
RVC (cont.)	马跑丢了 the horse ran away and got lost							1	1				
	马跑不见了 the horse ran away and disappeared												1
	马跑走了 the horse ran away	1	1	1	2	1	2						
	马逃出来了 the horse escaped									1			
	马回来了 the horse came back	2	1		2	2	2	1		1			1
	把腿摔断了[O topicalized] so the leg broke								1	1	1		
	腿摔断了 the leg broke												1
	带走了 took away	1		1		2							
	被拉走了 were dragged away											1	
	被征过去了 were drafted away										1		
	失去了宝贵的生命 lost the valuable life											1	
	保住了自己的性命 saved his life									1		1	
	说完了[58] finished speaking			1									
FES-ACT	..听了非常吃惊，觉得… very surprised after hearing it, they							1	1	1		1	1
	跑了以后, 老人… after (it) ran away, the old man …								1				
	邻人看了以后, 说… After seeing (it), the neighbors said…						1						
FES-ACC	过了几天, … after a few days							1	1			1	
	过了不久, … not long after….								1				
FES-ACH	来了以后, 他…. he …after coming (to the village)				1								

Note: "1" means that the participants used V-*le* correctly in obligatory contexts
"2" means that they did not use V-*le* when it was necessary.

[58] This is the last sentence of a narrative.

6.2.2 The use of *mei*-V in obligatory context by the learners and the natives

Table 6-2
The use of obligatory mei-V by the learners and the native speakers

OB *mei*- V in utterances		*J*	*C*	*B*	*P*	*M*	*S*	L	Liu	S	X	Zh	Z
ACH	老人的儿子没去 the old man's son didn't go	1							1				
	没死 didn't die										1		
RVC	没找到 didn't find (it)									1			
	没想到第二天 didn't expect that the next day….										1		
	没带走老人的儿子 (he) didn't bring the old man's son away				2		1						
	没被征过去 (he) was not drafted away										1	1	1
	没显示出 …didn't show…								1				

Note: "1" means that the participants used *mei*-V correctly in obligatory contexts and "2" means that they did not use *mei*-V when it was necessary.

6.2.3 The use and non-use V-*le* in optional context by the learners and the natives

Table 6-3
Dropping V-le in optional contexts by the learners and the native speakers

Omission of OPT V-*le*		*J*	*C*	*B*	*P*	*M*	*S*	L	Liu	S	X	Zh	Z
RVC	带回来 ( )两匹马 brought back 2 horses	/		/	/		/						
	摔(断) ( ) 一条腿 fell (broke) a leg	/					/						
	摔断( )腿 broke the leg		/		/								
FES-RVC	骑着马出去( ), 结果… riding the horse out, as a result								/		/		
FES-RVC	从马上跌落 ( ),… fell down from the horse back											/	
	从马上摔到 ( )地上 fell to the ground from the horse back…							/					
FES-ACH	从马上摔 ( )下去 fell down from the horse back	/	/	/	/		/		/				/

Note: "/" means that the participants did not use V-*le* when it was optional.

Table 6-4
Supplying V-le in optional contexts by the learners and the native speakers

Suppliance of OPT V-*le*		*J*	*C*	*B*	*P*	*M*	*S*	L	Liu	S	X	Zh	Z
RVC	带回来(了)两匹野马 brought back 2 wild horses												√
	摔断(了) 腿 broke the leg											√	√
	摔断(了) 一条腿 broke a leg			√		√		√					
	逃过(了)这一劫 escaped from this disaster									√			
FES–RVC	邻人看到 (了) 以后说… when they saw it, they said…			√		√							
	骑着马出去(了), 然后… riding the horse out, then									√			
	摔下来 (了)… fell down and …								√				
	打完 (了) 仗以后，..... after having finished fighting the war, ...								√				
FES-ACH	摔(了)下来, 结果… fell down, as result…									√	√		

Note: "√" means that the participants used V-*le* when it was optional.

6.2.4 The non-use of disallowed *V-*le* by the learners and the natives

Table 6-5
*Dropping *V-le in a disallowed context by the learners and the native speakers*

V-*le		*J*	*C*	*B*	*P*	*M*	*S*	*L*	Liu	S	X	Zh	Z
STA	有一个老人 there was an old man…	1	1			1	1		1				
ACH	将军来他们村子…. a general came to their village to…	1	2		1								
	他们来老人的家說對不起 they came to the old man's home to say…					1							
RVC	他们跑来恭喜他 they ran to him and congratulated him	1		1									
OPV	他不这么想 he didn't think (feel) this way					1							
	不可以去 he couldn't go					2							

Note: "1" means that the participants did not use *V-*le* correctly; and
"2" means that they used *V-*le* incorrectly when it was disallowed.

6.2.5 The use of S *le* by the learners and the natives

Table 6-6
The use of S le by the learners and the natives

S *le*		*J*	*C*	*B*	*P*	*M*	*S*	*L*	Liu	S	X	Zh	Z
INC	觉得他发疯了 thought he became crazy	1	1	1		1	1			1			
	这个人糊涂了 this man lost his mind									1			
	要打仗了 the war was going to be fought											1	
	人死了很多了[59] many people have died									1			
COS	现在老人有三匹马了 now the old man had 3 horses…	2	2	2	2	2							
	不要找了 don't look for (it) anymore												1
	又为他高兴了 felt happy for him this time								1				
	决定不看老人了 they decided not to visit him anymore				2								
	不要跟他讨论了 didn't want to discuss with him anymore			2									
	不要帮助他了 didn't want to help him anymore		2										
	不要跟他说话了 didn't want to speak to him anymore	2											
	不再理他了 didn't want to get involved with him								1				
	更纳闷了 felt even more puzzled									1			
	不能当兵了 couldn't serve in the army anymore									1			
	记不清/记不得了 couldn't recall clearly now								1			1	

6.3 DISCUSSION

This experiment was conducted when learners J, B and C were at the end of their 8th semester of Chinese, while learners P, M and S were at the end of their 6th semester of Chinese. J, B and C had been exposed to both V-*le* and S *le* for 3 years at that point; P, M,

[59] This is a so-called "double-*le*" utterance. We classified it as a S *le* utterance based on the use of the second *le.*

and S were exposed to V-*le* and S *le* for 2 years. As a result of different lengths of exposure to the language and learning time within the learners group, J, C, and B produced, on average, more utterances containing verbs than P, M, and S. The former produced a total of 114 verbs, and the latter 98 verbs. Some idiomatic expressions such as "there was one day" and "once upon a time", which were expressed with the verb "to have", were not counted in those utterances.

The native speakers, as a group, used more verbs than the learner group in retelling this short story, though there was a considerable range between the most productive (55 verbs) and the least productive (33 verbs). The learners group used an average of 35 verbs and the native speakers 42 verbs.

Table 6-7
Number of verbal utterances by learners and native speakers in "The Old Man and His Horses"

	J	**C**	**B**	**P**	**M**	**S**	L	Liu	S	X	Zh	Z
Number of verbs for each participant	38	36	40	41	27	30	37	45	55	33	43	39
Numbers per group and sub-group	114			98			252					
	212											
Average score for learners and controls	35						42					

As the learners had not heard the story before, they closely followed the story as it was presented in the English version. The native speakers were more familiar with the content of the story and tended to use more of their own words to retell the fable. As a result, the native speakers used a greater variety of verbs in their versions, including state verbs, activity verbs, accomplishment verbs and achievement verbs. Both groups used a

variety of resultative verb compounds such as *ran away, fell from the horse, broke (a) leg,* that were called for by the content of this story.

However, the choice and variety of verbs used by the two groups tended to be polarized. The learners used "the learners' verbs", which were the basic verbs to convey the meaning of a story. The native speakers used "the native speakers' verbs", which not only conveyed the meaning of the story, but also were more colorful, descriptive and conveyed more of the subtleties of the story. For example, a native speaker would replace "broke a leg" by "became crippled" or "lost their valuable life" for "died". This is obviously due to the very different levels of language proficiency and native vs. non-native linguistic competency. The learners, after 3 and 4 years of learning the language in a classroom setting in a non-target language environment and without any extended immersion or cultural[60] experiences, simply did not have such a rich repertoire of vocabulary, nor a complete system of syntactic structures that would allow them to express themselves in a more "native" way.

In the following sections, we will discuss how the learners and the natives used V-*le* in obligatory, optional, and disallowed contexts; how they used S *le*; and compare the use of V-*le* and S *le* by the two groups in order to understand the acquisitional process or stages of the learners in the study. As the sampling for this study was small, we do not intend to generalize the findings to include any claims about the patterns of acquisition of V-*le* and S *le*. As we stated in the beginning of this chapter, the goal of this study was mainly focused on investigating whether there was a difference in the use of V-*le* and S *le* by the learners, and to some extent the native speakers, when they were tested with

[60] Perhaps this was cultural as well since their recollections may have been from hearing the story told with embellishments and perhaps a certain level of "performance" by the tellers? The learners group had only a printed knowledge of the story rather than one with cultural foundations.

different types of tasks. In other words, we wanted to know whether the learners and the natives behaved the same way in terms of the use of V-*le* and S *le* with a highly controlled grammatical judgment- production cloze task and with a loosely controlled oral production task.

6.3.1 The use of obligatory V-*le* by the learners and the native speakers

Learner group

The six learners used 20 verbal utterances that required the use of V-*le* and 3 utterances that required the negative form of V-*le*, which was *mei*-V. They supplied 12 instances of V-*le*, and 2 instances of *mei*-V. If we counted *mei*-V as part of the obligatory use of V-*le*, the correct use of obligatory V-*le* was 60.9% (14/23).

The learners performed best with the use of obligatory V-*le* in the category of first event in a sequence (FES). Two learners each produced 1 instance of this type of syntactic structure, and both of them supplied V-*le* correctly. The correct usage of V-*le* as first event in a sequence was thus 100% (2/2). Three learners each produced 1 instance of *mei*-V, and had a 66.66% (2/3) of correct usage rate. One learner made the mistake of using "*bu*-V (不 V)", the negative marker for habitual or truthful statements, instead of "*mei*-V" for describing a perfective event.

The six learners used 8 different verbs to produce 23 tokens that required the perfective aspect marker -*le* or *mei*- in their specific contexts. Since the learners were all recounting the same story, they tended to use the same basic verbs to describe the same events. For example, the resultative verb compound *ran away* (pao-zou 跑走 [run-leave]) was used by all the six learners, and another resultative verb compound *came back* (hui-lai 回來 [return-come]) was used by five learners.

Among the 8 verbs used, there was 1 state verb (lived 住了 zhu-*le*), 1 activity verb (looked 看了 kan-*le*), 2 achievement verbs (came 來了 lai-*le*; did not go 沒去 *mei*-qu), and 4 RVCs (ran away 跑走了 pao-zou-*le*; came back 回來了 hui-lai-*le*; took away 帶走了 dai-zou-*le* & did not take away 沒帶走 *mei*-dai-zou; finished speaking 說完了 shuo-wan-*le*). Unlike the native speaker group, none of the six learners used accomplishment verbs in this task. The table below shows the rate of correct use for each type of verb used and the number of instances a specific verb was used by the learners.

Table 6-8
Correct use of OB V-le in relation to situation types by the learners

verb types	**verbs**	**# of tokens**	**rate of correct use**	
STA (1)	lived 住了 zhu-*le*	1	100%	(1/1)
ACT (1)	after having looked (FES-act) 看了以後... kan-*le* yihou,…	1	100%	(1/1)
ACC (0)	N/A	0	N/A	
ACH (2)	came 來了 lai-*le*	2	50%	(1/2)
	came (FES-ach) 來了以後,…lai-*le* yihou,…	1	100%	(1/1)
	did not go 沒去 *mei*-qu	1	100%	(1/1)
RVC (4)	ran away 跑走了 pao-zou-*le*	6	67%	(4/6)
	came back 回來了 hui-lai-*le*	5	20%	(1/5)
	took away 帶走了 dai-zou-*le*	3	57%	(2/3)
	did not bring (him) away 沒帶走 *mei*-dai-zou	2	50%	(1/2)
	finished speaking shuo-wan-*le* 說完了	1	100%	(1/1)

The data suggests that the learners in general tended to perform better on V-*le* with state and activity verbs aspect. One might conclude that, at least in this study, the result would partially disconfirm the Aspect Hypothesis which postulated that L2 learners tended to mark perfective aspect with achievement (including RVCs) and accomplishment verbs rather than with activity and state verbs at the early stages of development. However, closer inspection tells us that: (1) the one learner who marked the activity verb "look" with-*le* actually interpreted the meaning of "look" as "see"—an achievement verb (RVC); (2) there was only one token of activity verb among 23 tokens, thus the 100% correct rate was not representative at all; and (3) it happened that this "activity" verb appeared in a V-*le* conducive context—the 1st action in a sequence.

Nevertheless, we might draw some preliminary conclusions from the above data. Unlike the results from the grammaticality judgment task "A Trip to Beijing" where they performed just like the native speakers in marking obligatory V-*le*, the learners, even the more advanced ones, did not mark the obligatory perfective aspect systematically in this oral production when the context required it. The higher proficiency Group 1 learners (J, B, and C) performed significantly better than Group 2 learners (P, M, S). The average correct usage rate was 91% (10/11) for Group 1 compared to 33% (4/12) for Group 2. The Group 2 learners performed error free (2/2) with obligatory V-*le* when it was the 1st action in a sequence. However, if we only counted the obligatory V-*le* used for "single events", the Group 2 learners only had an accuracy rate of 20% (2/10). They were still at an early stage of development in terms of marking the perfective aspect for achievement verbs or RVCs in this task**,** but they were at a more advanced stage in marking the perfective aspect for the first event in a sequence (FES).

Spontaneous speech production does not always accurately reflect a learner's linguistic competence, as many factors can inadvertently influence the experiment. For example, Learner B in Group 1 prepared better than the other learners in terms of vocabulary and sentence structures, judging from his notes (collected by the researcher), and coincidentally B produced many more V-*le* (5) than other learners in this task. He was also the only one who scored 100% of accuracy rate on obligatory V-*le*. The result might vary if his performance were truly spontaneous, without any prior preparation.

Native speaker group

We will now briefly examine how the native speakers used OB V-*le* and *mei*-V in this same oral production task. Instead of 8 verbs used by the learners, the native speakers used a variety of verbs with a much larger quantity to recount the same story. They used 3 state verbs, 8 activity verbs, 3 accomplishment verbs, 9 achievement verbs and 13 RVCs for a total number of 62 tokens. As native speakers, they naturally have command over a larger and more sophisticated vocabulary. For example, they would use "raised a horse (养了一匹马 [yang-*le*-yi pi ma])", instead of learner's "had a horse (有一匹马 [you-yi pi ma])". Due to their larger vocabularies, the native speakers used many OB V-*le* in their story-telling. They also used many more complex syntactic structures such as the *bei*-sentence and *ba*-sentence, which were more conducive to the usage of V-*le* in a narrative. The following table provides a detailed account of the verbs and verb types used by the native speakers in the control group.

Table 6-9
Usage of OB V-le in relation to situation type by the natives

Verb Type	**Verb**	**# Occurrence**
STA (3)	lived [an old man]	1
	raised [a horse]	1
	stayed [behind]	1
ACT (4)	heard [others' words]	1
	said [some words]	1
	[very surprised after having] heard [it]…	5
	[after (it)] ran away, …	1
ACC (3)	ran out (see note 12)	1
	brought [2 wild horses] back	5
	[a few days, not a long time] passed,..	4
ACH (9)	[the horse] disappeared	5
	lost [the horse]	3
	[the horse] ran away	1
	lost [the horse'] trace	1
	the moment of …arrived	1
	died	4
	did not die	1
	became crippled	1
	[the leg] broke (O topicalized)	1
	did not go	1
RVC (13)	ran [away] + [got] lost	2
	ran [away] + disappeared	1
	escaped	1
	came back	3
	[the leg] broke (O topicalized)	4
	dragged away	1
	was drafted away	1
	was not drafted away	3
	lost[61] [the valuable life]	1
	preserved [his life]	2
	did not find (it)	1
	did not expect	1
	did not show	1
Total tokens		62

[61] This "lost" is different from the verb "lost" in "the horse got lost"

6.3.2 The use of optional V-*le* by the learners and the natives

In the context of optional V-*le*, the learners produced 4 different verbs and the native speakers produced 9 verbs (See Tables 22 and 23 in 6.2.3.). The two most common verbs that both the learners and the native speakers used were *fell down(*摔( )下去[shuai ( ) xia-qu]) and *brought back [two horses]* (带回来( )两匹马[dai-hui-lai ( ) liang-pi-ma] and 带回来(了)两匹马[dai-hui-lai-*le*- liang-pi-ma]). In the former case, five learners and two native speakers dropped -*le* between the achievement verb "fall" and the directional verb compound "down-go"; and in the latter case, four learners omitted -*le* and one native speaker supplied -*le* between the RVC *bring back* and the quantified object *two (wild) horses*.

Table 6-10

Four verbs and their contexts used by the learners		occurrences
(L1)	brought back two horses 带 回 来 ( ) 两 匹 马 bring-return-come ( ) two-CL-horse	(4)
(L2)	fell down from the horse back 从 马 上 摔 ( ) 下 去 from-horse back-fall-( )-down-go	(5)
(L3.1)	fell and broke leg. 摔 断 ( ) 腿 fall-break- ( ) - leg	(2)
(L3.2)	fell and broke leg/a leg 摔 断 ( ) 一 条 腿 fall-break- ( ) -one-CL- leg	(2)
(L3.3)	fell and broke a leg 摔 断 (了) 一 条 腿 fall-break-(*le*)-one-CL-leg	(2)
(L4)	[when they] saw it, they… 看 到（了）以后， 说… look-reach-(*le*)-after, [they] say…	(2)

Table 6-11

Nine verbs *and their contexts used by the native speakers*	occurrences
(C1.1) [riding the horse to] go out 骑 着 马 出 去( ), 结果… ride-*zhe*-horse-out-go ( ), as a result…	(2)
(C1.2) [riding the horse to] go out 骑 着 马 出 去 (了), 然后… ride-*zhe*-horse-out-go- (*le*), then …	(1)
(C2) fell down from the horse back 从 马 上 摔 ( ) 下 去 from-horse back-fall-( )-down-go	(2)
(C3.1) fell down from the horse back 摔 (了) 下 来, 结果… fall- (*le*) down-come, as a result…	(2)
(C3.2) fell down from the horse back 从 马 上 摔 下 来 (了)… from-horse back-fall-down-go-(*le*)	(1)
(C4) fell down from the horse back 从 马 上 跌 落 ( ), … from-horse back fall-drop-( ), …	(1)
(C5) fell and landed on the ground 从 马 上 摔 到 ( ) 地 上 from-horse back-fall-reach-( )-ground-on	(1)
(C6) brought back two wild horses 带 回 来 (了) 两 匹 野 马 bring-return-come -(*le*)- two-CL-wild-horse	(1)
(C7.1) fell and broke [a] leg 摔 断 (了) 腿 fall-break- (*le*))-leg	(2)
(C7.2) fell and broke a leg 摔 断 (了) 一 条 腿 fall-break-(*le*)-one-CL-leg	(1)
(C8) escaped from this disaster 逃 过 (了)这 一 劫 escape-pass-(*le*)-this-one-disaster	(1)
(C9) after finished fighting the war,… 打 完 (了) 仗 以后，..... fight-finish-(*le*)-war-after, ….	(1)

The verbs used by both the learners and the native speakers in the optional V-*le* contexts were all RVCs whose endpoints were encoded semantically either in the second or the third verb which was a telic (an achievement) verb, such as *come, go, break, reach, finish, drop* (C4) and *pass* (C8). A particular feature about this set of RVCs was that most of them, except *look* (L4), *bring* (L1 and C6) and *fight* (C9), were composed of an achievement verb as the main verb, such as *fall, escape,* and *get out*, by the nature of the story in question.

When the RVCs the last clause of a discourse, they usually carry the perfective -*le* to denote enclosure of the narrative or the termination of the event. However, when they are the 1st event in a sequence of multiple events, -*le* is usually dropped by native speakers as the completion is encoded two ways: (1) the endpoint is semantically encoded in the 2nd or the 3rd verb on the lexical level; and (2) the boundedness is also semantically constrained by the 2nd clause.

In this task, the learners more often omitted the perfective V-*le* both as an actual number of responses and as a proportion of their responses.compared to native speakers. This was a surprising result in that it was different from their habitual behavior where they tended to undersupply obligatory V-*le* and oversupply the optional V-*le*. The other significant point was that the learners tended to omit the perfective marker V-*le* with certain types of verbs or discourse context. The data showed that: (i) 4 learners omitted -*le* in *brought back* (dai-hui-lai-( )) *two horses*; (ii) 5 learners (and 2 natives) omitted -*le* for *fell down* (shuai ( )-xia-qu) *from the horseback*; and (iii) 4 learners omitted -*le* for *broke* (shuai-duan-( )-) *a leg*.

The detailed breakdown (L1- L4 and C1-C9) above points to a fact we have reported in Chapters 4 and 5. Apart from these three instances just mentioned, to use and not to use a V-*le* in an optional context is truly a matter of pragmatics. Its use depends mainly on a speaker's idiosyncratic point of view and semantic judgment, and therefore it is difficult to capture the rules or the motivations behind the user's choice. However, we will examine and discuss those three instances of optional V-*le* mentioned above in order to understand why most of the participants, including both learners and native speakers, seemed to agree on the omission of V-*le* in those circumstances.

If the word order in (i) was "*brought two horses back*" (dai-liang-pi-ma-huilai[带两匹马回来]→ bring-two -CL- horse- return-come) instead of *brought back two horses* (dai-hui-lai-liang-pi-ma [带回来两匹马]→ bring-return-come-two -CL-horse), it then should take the perfective V-*le* after the activity verb "to bring" since "bring" has a quantized complement, "two horses", thus making the whole verbal compound an accomplishment verb type. To make our point more clear, we list these two sentences below:

(i.a.) brought back two horses
带 回 来 ( ) 两 匹 马
dai -hui- lai - ( ) - liang - pi -ma
bring-return-come - ( ) - two-CL-horse

(i.b.) brought two horses back
带 (了) 两 匹 马 回 来
dai - (*le*) - liang - pi - ma - hui - lai
bring - (*le*) - two- CL-horse-return-come

The boundedness of the first event in (ii) *fell-down* (shuai ( )-xia-qu) was defined by two factors. First, unlike RVCs such as "finish eating" that could be located in the future or in an imperative sentence, the semantic property of the RVC "*fell down from the horseback*" denotes primarily an event that already took place. Second,the main verb of the 2nd event listed in (ii) "and then broke his leg/a leg" also denoted an endpoint. Therefore the 1st event in the sequence logically should reach its endpoint before the 2nd event could reach its endpoint in turn. Five learners and two native speakers reasoned this way and omitted V-*le* in *fell down* (shuai- ( )-xia-qu), making it the most uniform responses among the verbs with optional –*le* in this task.

The boundedness for (iii) *broke* (shuai-duan)-( )-*a leg* was encoded in the achievement verb "duan: to break, to be broken". Just like *fell down*, the semantic property of *to break a leg* primarily denoted a realized event instead of a planned event or a command. Unlike the example of *bring two horses back* in (i.b.), in which "*bring*" was an activity verb and must take V-*le* to fulfill the condition of boundedness in an accomplishment verb compound, "*break*" in (iii) is an achievement verb with the endpoint inherently encoded. V-*le* therefore became optional even though the achievement verb "*break*" had a quantized complement "*a leg*".

6.3.3 The use of disallowed *V-*le* by the learners

We analyzed the instances listed in Table 6-5 (Section 6.2.4), classified them by verb type with numbers of correct and incorrect use, and displayed them below for ease of discussion. We have to point out a fact here before entering into the discussion of *V-*le* in this oral task. When qualitatively analyzing a free oral production task such as our story-retelling task, it is feasible to discuss the correct and incorrect usage of obligatory V-*le* in a

more comprehensive manner, since the range for use of the obligatory V-*le* is quite limited. However, it is not easy to describe and discuss how the learners correctly chose *not* to supply the disallowed *V-*le* in all contexts since such a task requires a full analysis of each occurrence containing a verb for all participants. We therefore limit our discussion to the most significant instances produced by the six learners in this section.

Table 6-12
*The use of disallowed *V-le by learners*

	Instances	Verb Type	Occurrences
1.	有 (/) 一个老人…	(STA)	(4L)
	There was an old man…		
2.a	将军来 (/) 他们村子帶年輕人….	(ACH)	(2L, *1L)
	A general came to their village to draft young men…		
2.b	他们来 (/) 老人的家說對不起….	(ACH)	(1L)
	They came to the old man's home to say sorry…		
3.	他们跑来 (/) 恭喜他…	(RVC)	(2L)
	They ran to him and congratulated him…		
4.a	他不这么想 (/)…	(OPV)	(1L)
	He did not think this way…		
4.b	他不 (*没) 可以去 …	(OPV)	(*1L)
	He could not go…		

Statistically, the six learners performed very well in terms of disallowed *V-*le* as they only produced two errors out of 212 verbs. In general, they did not over-supply *V-*le* when the context did not call for it in this oral task (See Table 24, in 6.2.4.).

They were familiar with idiomatic expressions such as “there lived an old man….”, “once upon a time”, and “one day (有一天 [to have- one-day])”, and made no mistakes by adding V-*le* to this type of fixed expression.

They usually did not add -*le* to any OPV verbs (such as to want, can…). Errors such as in 4.b “*(he) couldn’t go*” did not happen often. The same learner did not use *mei*- in 4.a for the optative verb *think* (想-xiang), but used *mei*- in 4.b for the optative verb *can/be able to* (可以-keyi). We believe this was a performance issue, not one of competence.

The verb “*to come*” (来-lai) in 2.a and 2.b is a difficult one for beginning learners of Mandarin Chinese. When “*to come*” functions as an achievement verb, such as in “Here they come!” (tamen-lai-le [他們来了！] they-come-*le*), V-*le* or S *le* is required, depending on the context and the speaker’s point of view. However, both *come* and *go* in Chinese often serve as an adverbial (come/go + a location) to indicate in which location an event has taken place, is taking place, or will take place. The learner in question first omitted -*le* correctly in 2.b, then changed his mind and added a -*le* to the first verb *come* in this so-called “serial-verb sentence”. He might have seen the multiple events as a sequence (came to the village, then…), and that interpretation would have caused him to add -*le* to the verb “*come*”.

6.3.4 The use of S *le* by the learners and the natives

As we have tentatively concluded in the discussion section of Chapter 5, “A Trip to Beijing”, based on the results of the large survey, similar to the optional V-*le*, there is no consensus on the use of S *le*. Its use seems to entirely depend on the point of view of the speaker as to whether there is noteworthy new information to be brought to the attention of

the interlocutor of the discourse in question. If we follow this line of logic, there should not be any obligatory or disallowed contexts for the use of S *le*. However, as we have pointed out in Chapter 5, the design of the grammaticality judgment and production task, "A Trip to Beijing", might not facilitate a comprehensive use of S *le* in all situations. This is because S *le* is mainly a discourse marker and its use represents the pragmatic judgment of the user under certain circumstances. We thus analyzed the use of S *le* in a more conventional way, without categorizing learners' use of S *le* as correct or incorrect. Instead, we classified all the instances of S *le* into the categories of "inception" or "change of status" according to current linguistic theory and the prescriptive grammar. We marked 1 if a participant used S *le* in either context, and marked 2 if a participant produced a sentence but did not use S *le* in a context that signals "inception" or "change of status". The coding of 2 should not be interpreted as an error, but rather a pragmatic use or non-native use of S *le* by the learners.

The learners exhibited an interesting pattern on the use of S *le*. They scored 100% (5/5) on the use of S *le* when it denoted inception (such as "he became crazy"), but 0% (0/9) when it denoted the change of status/state (such as "he then had 3 horses...).

Table 6-13
S le denoting inception

1. …thought he became crazy 觉得他发疯了	(5L, 1C)
2. …this man started to lose his mind 这个人糊涂了	(1C)
3. …the war was about to start… 要打仗了	(1C)
4. …more and more people have died 人死了很多了	(1C)

There were four cases of “inception” invoked by the native speakers, and a different native speaker used each of them once. One of the four tokens (#1: …. [They] thought he became/had become crazy) was also used by five of the six learners in addition to a single native speaker. However, that was the one and only instance the learners used S *le* in this task. Apart from contexts denoting “inception”, the learners also used five different contexts that “theoretically” required the use of S *le* to signal a change of status, but none of them used the S *le* to denote a change of state.

Table 6-14
S le denoting change of state

L1. …now the old man had 3 horses…	(*5L)
现在老人有三匹马了	
L2. …they decided not to visit him anymore	(*1L)
决定不看老人了	
L3. …did not want to discuss with him anymore	(*1L)
不要跟他讨论了	
L4…. did not want to help him anymore	(*1L)
不要帮助他了	
L5…. did not want to speak to him anymore	(*1L)
不要跟他说话了	
C1 … do not look for (it) anymore	(1C)
叫他不要找了	
C2 …felt happy for him this time	(1C)
又为他高兴了	
C3. …did not want to get involved with him anymore	(1C)
不再理他了	
C4. …felt even more puzzled	(1C)
更纳闷了	
C5. …could not serve in the army anymore	(1C)
不能当兵了	
C6. …could not recall clearly now	(2C)
记不清/记不得了	

* indicating “omitting S *le*”, L indicating “learner”, and C indicating “native”

A majority of the instances involved an obvious syntactic structure that would convey the meaning of "…not V/SV anymore", a change of situation at the moment of speaking, such as in L2, L3, L4, L5, C1, C3 and C5. Four learners used that structure but none used S *le* at the end of the utterance. On the other hand, three native speakers used this type of structure, and all of them supplied S *le* at the end of the sentence.

Utterance (L1) "…*now the old man had 3 horses*…" is difficult for non-native speakers of Mandarin. The only indication of a change of status was the time adverbial "now". However, a native speaker would recall the detail of the story line, connect it to the later development, and then express this change of situation with the presence of S *le*, such as "so now he had 3 horses *le*" –meaning that he didn't have three horses before. This notion of "change of status" exists in all languages, but there is no formal linguistic form to mark the notion morphologically on the surface level in English. As a result, the S *le* denoting change of status was probably much more difficult for learners to grasp than the perfective V-le.

6.3.5. A comparison between *A Trip to Beijing* and *The 0ld Man and His Horses*

Although it is difficult to compare the results from a quantitative study with those of a qualitative study, one of the goals of the story-retelling task, "The Old Man and His Horses", was to compare side by side those results with those from "A Trip to Beijing". In the context of obligatory V-*le*, the learners performed differently in the two tasks. In the cloze task, learners performed very well with the obligatory V-*le*. Five of the six learners scored 100% (5/5) for correct use, and the 6th scored 80% (4/5). In the oral production task, the six learners together supplied only 12 instances of V-*le* and 2 instances of *mei*-V out of 20 utterances containing verbs that required V-*le* and 3 utterances that required *mei*-V. The

correct use of obligatory V-*le* was 60.9% (14/23). They matched the form V-*le* to the concept of perfectiveness best in the context of FES (first event in a sequence) in both tasks. The verb type they produced most for "The Old Man and His Horses" was RVC, but they did not always supply V-*le* to those RVCs when they were at the end of an utterance syntactically. Surprisingly, they did not produce any ACC type predicates.

In the context of optional V-*le*, the learners also performed differently in the two tasks. They supplied an average of 66% of V-*le* out of 10 tokens when it was optional, a much higher percentage than the native speakers in the cloze task (see Table 5-3). If we look at individual scores, we see that two learners supplied 80% of V-*le*; three learners supplied 70% of V-*le*, and the 6th learner 30% of V-*le* in optional contexts (see Table 5-7). However, the learners performed in the opposite manner in the oral production. They more often omitted the perfective V-*le* number-wise and percentage-wise than the native speakers, regardless of whether RVCs or achievement verbs were the first action in a sequence.

In terms of disallowed *V-*le*, the learners also performed somewhat differently in the two tasks. Although there was significant variation among the six scores, which ranged from 40% to 93%, the average score for the correct non-use of disallowed *V-*le* was 62% in "A Trip to Beijing". In the oral production task, the six learners only produced two errors out of 12 instances in which the V-*le* was not allowed, with a correct non-use rate of 83%.

Finally, in terms of the use of S *le*, the learners seemed to perform more consistently across the two tasks, though it is difficult to compare the results directly as the distribution of S *le* was unequal in the two different modes of the tasks. Although the

learners supplied more S *le* in "A Trip to Beijing" than the native speakers did, they did not use as many S *le* (43% of use) as with optional V-*le* (66% of use) in this cloze task. Similarly, there were only five instances of S *le* in the story-retelling task, each of them produced by a different learner within the same context to denote inception of a state (e.g. "they thought that the old man had become crazy"). While the native speakers used many instances of S *le* to denote both the "inception" and the "change of state" of an event in the discourse of this free production task, the learners seemed unable to fully match the concept of change of status with its linguistic form S *le* in Chinese.

6.3.6 How native-like were the learners at this stage?

The six learners were at two different stages of Mandarin Chinese language instruction at the time of this task. J, B, and C in Group 1 were towards the end of their 4th year of Mandarin instruction, and P, M, S in Group 2 were towards the end of their 3rd year. The length of instruction had a direct impact on the acquisition of the aspect markers which is closely related in terms of the quantity and frequency of input and output, as well as the extent of internalized vocabulary, syntactic structures, and idiomatic expressions.

With this background in mind, we suggest that, even with the slight advance found in Group 1, both groups were still far away from being native-like in using V-*le* and S *le*. We will examine below the results from a different perspective in order to describe the different developmental stages within the two categories and their sub-categories.

Obligatory V-le attached to the main verb in a single event: If we go back to the complete table of results (see Table 6-1) and look side by side at the use of state, activity, accomplishment and achievement verbs with V-*le* by learners and the native speakers, we would find that the learners only used 6 different verbs (1 telic-state, 1 achievement, and 4

RVCs) compared to the 17 verbs (3 state, 2 activity, 2 accomplishment and 10 achievement verbs) used by the native speakers. The learners used 5 RVCs and the native speakers 8 RVCs as the main verb of an event. The average correct usage of V-*le* for all six learners was 52.63% (10/19)**.** If we separate the two groups, Group 1 had a correct rate of 80% (8/10) and Group 2 a correct rate of 22.22% (2/9).

In terms of the types and the varieties of the verbs, both groups of learners were still at the infant stage of development compared to the native speakers, though in terms of the use of *V-le*, Group 1 was at a more advanced stage. When we combined all types of verbs and tokens in this category, the Group 1 learners had a correct rate of 87% (10/12), compared to the 20% (2/10) of Group 2. It seems that the acquisition of V-*le* as the main verb in a single event had a dormant period between the 2nd and the 3rd year of instruction, during which the matching between the concept of perfectiveness and its linguistic form was taking shape before it became more native-like in the 4th year.

Obligatory V-le attached to the verb of the first event in a sequence: While the relationship between the concept of perfectiveness and its proper linguistic form was quite elusive for learners, especially for the beginners, perfectiveness contained in the first event of a sequence was more obvious to them than that reflected in a single event. This is attributable to the form-meaning harmony -- the perfectivity of a sequence that is explicitly expressed by the syntactic structures and the semantic cues, such as "*After* having said that, he went to ….". In terms of using V-*le,* even the Group 2 learners behaved quite native-like. However, in terms of the choice and the variety of the verbs, syntactic structures, and the idiomatic expressions employed in the story, the learners were not native-like.

Optional V-le and disallowed *V-le: Both groups of learners behaved more native-like in this task in their use of optional V-*le*. This is inconsistent with the reported behavior of other Chinese L2 learners who were more likely to oversupply V-*le* in optional contexts as reported in other studies and research (Li 1996, Yang et al.1999, Huang et al. 1998). The learners in general did not oversupply *V-*le* in disallowed contexts, especially when there were state verbs and OPV verbs. Even though we reported an error of this type, we have attributed it to performance rather than to the competence domain.

"Obligatory" S le and disallowed * S le: The so-called "obligatory" S *le* is the appearance of *le* at the end of a sentence used by *many*, but not *all*, Chinese to bring new information to the discourse for the benefit of the interlocutor(s). Since we have not found any strong evidence about any *true* obligatory S *le* in both our studies, we will put the word "obligatory" in parentheses. The "obligatory S *le*" is mainly used to denote the inception of a new event, or the change of state of an existing event. Both groups performed very native-like with S *le* as the marker of the inception of a state (100% = 5/5), but all of them, even the more advanced Group 1, behaved completely non-native like with S *le* as the marker of change of state (0%=0/9). The inception of an event only involves a point of departure. However, the change of status involves at least two points of reference: the moment of speaking and the previous situation. The mental comparison between the actual situations with the previous one/ones in an automatic and systematic fashion was probably a blind spot for most learners of Mandarin, even when they are at a more advanced developmental stage.

6.4. SUMMARY OF CHAPTER 6

In this oral task, the six learners first read a traditional Chinese fable in English, and then retold the story in Mandarin Chinese. The speech data from both the learners and the native speakers (the control group) were recorded, transcribed and analyzed.

The learners produced an average of 35 verbs per story, compared to an average of 42 verbs for native speakers. Both learners groups performed well with V-*le* in the first event of a sequence (100%) and S *le* denoting inception (100%). The average rate of correct V-*le* usage for combined group score was 59.25%. However, the Group 1 learners' correct rate was 85.71%, significantly better than the 40% correct rate for the less experienced, Group 2 learners.

Both groups behaved native-like and quite homogeneously in their use of optional V-*le* and disallowed *V-*le.* Both groups failed to mark S *le* (0% =0/9) when it denoted a change of state in the story. There was a significant discrepancy both in terms of the rate and in terms of the actual frequency of the use of S *le* between the learners and the native speakers. However, the cases of overgeneralization, undersupplying and oversupplying of V-*le* and S *le* were either few or non-existent.

CHAPTER 7

CONCLUSIONS

We had initially set out to conduct a two-year longitudinal study of the acquisition of the perfective marker V-*le* by adolescent classroom learners of L2 Chinese. Even though we were well aware of the existence of optionality for the use of V-*le*, it was not until we had conducted various experiments and collected a rich set of data over a span of two years did we realize that we encountered a major problem. The challenge was to find an established, consistent and reliable measurement to code these data in terms of correct use and incorrect use with V-*le*, as our raters did not always agree with each other whether V-*le* should be used or could be used in certain contexts. We reviewed literature in an effort to find some guidance. Though the Chinese aspectual system, especially the perfective marker -*le* and the sentential *le*, is one of the most studied linguistic topics, we not only did not find any specific principles and rules describing what is considered as correct and non-correct use of V-*le*, but also found conflicting views on how V-*le* is and should be used. We then turned to different grammar sources and textbooks for guidance. Apart from some very general statements, we still could not find any treatment of –*le* that reflected native speaker knowledge and use. Finally, we reviewed several well-known studies conducted during the last two decades of the acquisition of V-*le* (and S *le*) by L2 learners of Chinese, and again, we did not find the needed guidance. With one exception, none of them mentioned the word or concept of "optionality"[62] or explained in their methodology how they defined and coded "oversuppliance" (marking -*le* when it is

[62] Duff and Li (2002) was an exception. Not only did they mention the optionality of V-*le*, but also described how they resolved the disagreement between two raters in an endnote. The standard measurement of V-*le* was absent from their paper.

disallowed), "undersuppliance" (omitting -*le* when it is required), and "correct use" (not using -*le* when it is disallowed and marking -*le* when it is required). Although neither linguistic and prescriptive grammatical accounts of V-*le* nor the related research on the acquisition of V-*le* by L2 learners provided the needed guidance, we hypothesized that there must be some linguistic principles guiding native speakers to determine the obligatory and optional contexts regarding the use of the perfective marker V-*le*.

With this assumption in mind, we conducted a pilot test with 12 native speakers, using a cloze test, "A Trip to Beijing", to determine what can be defined as native speaker knowledge of -*le*. The results we obtained from the pilot test showed that, in addition to variable omission of -*le*, there were traceable patterns of consistent use and non-use of V-*le* in different contexts among the 12 native speakers. For example, they consistently used -*le* with accomplishment predicates (activity verbs with quantified direct objects); and consistently did not use –*le* with "*go verbs*" in a serial verbal constructions or "*say verbs*" in direct or indirect speech. Some of them would not use -*le* with achievement verbs having objects or when they were syntactically positioned as the first event in a sequence. Many of them would not use -*le* with resultative verb compounds having a quantified or a specified object.

Encouraged and guided by the findings of this pilot, we decided to backtrack by conducting a large survey with an improved version of "A Trip to Beijing" to determine the obligatory, optional and disallowed use of V-*le* among Chinese native speakers. We also hoped the results of this large survey would help us to better understand the linguistic motivations governing the native speakers' use of S *le*. We expected that the results from this first inquiry would allow us to postulate evidence-based hypotheses as to how V-*le* and

S *le* are realized in native speakers' speech data, which would, in turn, serve as evidence-based measurement for the coding tools we would apply in our acquisitional study with learners of L2 Chinese.

7.1 C**onclusions and hypotheses based on native speakers' data**

The results from our investigation of the use of the perfective marker -*le* with 482 native speakers in "A Trip to Beijing" showed similar patterns those we had found in our pilot test. The native speakers, 316 teenagers and 166 adults, consistently used –*le* with all the three ACC predicates with quantified objects (99.2%, 98.9% and 98.3%), ACT predicates (98%) as the 1st event in a sequence, and ACH predicates with a time complement (96%). They also consistently did not use -*le* in well-defined disallowed contexts, namely "*say verb*", "*go verb*", and "*optative verb*" constructions. There was variable non-use of -*le* outside the disallowed contexts with traceable patterns.

We carefully examined the findings of the large survey, used them as well as those from the control group in one of our subsequent learners' studies, "The Old Man and His Horses", as our basis for constructing plausible, data-driven hypotheses concerning the native knowledge and use of V-*le*. The results, based on the analysis of the data drawn from 482 natives in "A Trip to Beijing" (a written grammaticality judgment task) and from 6 natives in "The Old Man and His Horses" (a spoken spontaneous story-retelling task), allowed us to report that, as predicted by Li and Thompson (1981): (1) Only bounded predicates and events can carry the perfective marker -*le*; and (2) A predicate or an event is *bounded* when it meets one of the following requirements: (i) when its direct object is quantified (QO) or specified (SO); or (ii) when its verb is [+ punctual] and [telic] (ACH and RVC); or (iii) when the event is the first one in a sequence (FES).

Furthermore, the analysis of our native data indicates that, not only is there an interaction between the perfective viewpoint aspect marker -*le* and situation aspects (verb type categories or lexical aspects), but the presence or absence and the type of a direct object, as well as the syntactic structure, all contribute to the perfective aspectual meaning. Most importantly, the different combinations of these elements, namely verb type, direct object, and syntactic structure, form different constraints that in turn become the deciding factors for the obligatory and optional use of V-*le* among Chinese native speakers. In principle, the use of -*le* becomes obligatory in the following 4 contexts:

(1) When the telicity is not inherently encoded in the verb, such as an accomplishment predicate composed of an activity verb followed by a quantified or specified object;

(2) In the absence of a quantified or specified object, even the telcitiy is inherently encoded in the verb, such as an achievement verb or a RVC, the use of -*le* is also obligatory when such an ACH or a RVC is syntactically positioned at the end of a sentence, usually in a topic-comment sentence or as the second event in a sequence;

(3) An activity verb usually is not licensed to take -*le* due to its unboundedness or the lack of telicity. However, an ACT must take -*le* when it is the first event in a sequence, because not only it is bounded by the second event (therefore licensed to take -*le*), but that *anteriority* is denoted in such a construction; and

(4) When an achievement verb is followed by a quantified time complement such as three hours or two weeks, it behaves like an ACC predicate and must take -*le*.

On the other hand, the use of -*le* becomes optional with achievement predicates and RVC predicates, with the latter being the most optional context. However, the occurrence varies depending on whether a RVC carries a bare NP, or a quantified or specified NP, as

its object. RVCs with bare-NP object are less optional than those with a quantified-NP or a specified-NP object.

Similar to Verkuyl's (1972) conclusion (pp. 107 ff.) that subcategorization with respect to aspect must take place at an event higher node than the VP since information outside the VP must be taken into account, a semantic analysis of the verb types with obligatory use or optional use of *-le* must take time reference, completion of action as anteriority in relation to the main event, absence or presence of object, quantification or definiteness of object, and the syntactic structure into account as co-occurrence restrictions that impact the obligatory, optional and disallowed use of *-le*. The effect of these restrictions would have to be reflcted in the semantic component and incorporated into the learners' grammar.

With this awareness in mind, we present a simplfied pattern of native V-*le* use below in a heirarchichal order from obligatory to optional.

Table 7-1
The pattern of distribution with OB V-le and OP V-le based on native data

Use of -le	Predicate types
obligarory	ACC (ACT-QO; ACT-SO) ACH & RVC w/o object
↓	ACT (FES) ACC-shifted type (ACH - QO)
optional	ACH (FES)
↓	
optional	RVC-O
↓	
optional	RVC-QO, RVC-SO

Note: ACT-activity, ACC-accomplishment, ACH-achievement, RVC-resultative verb compound, QO-quantified object, SO-specified object, FES-1st event in a sequence

The consistent use of -*le* with ACT+QO/SO, and ACHs and RVCs positioned at the end of a sentence without an object leads us to conclude that the un-boundedness in the former and the lack of object in the latter are most likely the constraints that result in non-optionality. The high frequency of non-use of -*le* with RVCs carrying quantified or specified objects also leads us to conclude that the co-occurrences of inherent boundedness and the presence of non-bare NPs as direct objects are most likely to license optionality. From this hierarchical order, we also observed that the objects of different verb types play an important role in determining whether -*le* should be used.

In sum, the patterns of the use of -*le* appear strongly related to the situation aspect of the verb, and the presence, absence, or type of its object. ACTs and RVCs, the former unbounded and the latter bounded, behave in opposite ways even when they both have quantified or specified objects—ACTs become weakly-bounded ACCs, and RVCs become even more strongly-bounded. Furthermore, RVCs behave differently depending on whether they have objects and the type of the objects they carry. If they do not have an object, the use of –*le* is obligatory, just as other situation types without objects. If they do, then the "likelihood of optionality" (that is, how consistently native speakers use -*le* to mark the predicates) varies from more consistent use of -*le* for RVCs with quantified and specified objects, to less consistent use of -*le* for RVCs with non-quantified or specified objects. ACHs are ranked in the middle. The optional use of -*le* is more consistent for ACHs with quantified or specified objects, and less consistent for ACHs when they are the first event in a sequence.

Our findings disconfirmed some claims advanced by linguists and some rules prescribed by grammarians in textbooks written for learners of L2 Chinese. Contrary to the

theory of *Neutral Viewpoint* in Chinese proposed by Smith (1991, 1997), our data showed that not all aspect markers, at least in the case of the perfective marker V-*le*, are syntactically optional. Also contrary to prescriptive grammar rules found in commonly used textbooks of Mandarin Chinese concerning various disallowed *V-*le* contexts, a small percentage, ranging from 7% to 12% depending on tokens, of native speakers including both adolescents and adults added V-*le* to some "*say verb*" predicates, cognitive verbs, and the first verb in so-called "serial verb construction" utterances. This suggests that there are differences between prescribed grammar rules and actual usage for some linguistic features that have complex semantic properties and multiple pragmatic functions. This might also be an indication of a broader shift in languge use.

The data we obtained from the studies with Chinese native speakers disconfirmed some proposals advanced by linguists, such as Li and Thompson (1981) and Smith (1991, 1997). Contra Li and Thompson's claim (1981) that the usage of V-*le* mainly depends on the speaker's point of view[63], an implication of a "global optionality" without obligatory use of –*le,* our native data show that there are seemingly obligatory uses of V-*le*. Native speakers of Chinese in our study, ranging from 96% to 99%, consistently used the perfective marker V-*le* to denote the perfectivity of an event in at least two contexts: (i) ACC predicates; and (ii) ACH with a quantified O (a shifted type ACC, such as "*We stopped for 3 hours"*). Furthermore, our findings contradict Li and Thompson's argument concerning the motivation of the non-use of –*le* among Chinese native speakers. They

[63] According to Li & Thompson (1981), "… it is perfectly normal to use –*le* where the message being communicated has to do with bounding an event by naming a specific quantity of the direct object. It is crucial, however, to notice that *speakers can differ* in their judgment about how much a quantified direct object serves to bound an event…." (p. 191) ; and "…speakers can have different views about how bounded an event is, and this will determine whether they decide to use –*le* in certain situations." (p.192)

claimed that, apart from disallowed contexts, native speakers of Chinese would not use *-le* when they judge the related predicates *not to be sufficiently bounded*. Our findings show the exact opposite. Disallowed contexts apart, Chinese native speakers would not use *-le* when the predicates in question are *strongly bounded* with the co-occurrence of several contributing elements, as we discussed above and illustrated in Table 7-1.

Smith's Neutral Viewpoint Theory (1997) claimed that, "viewpoint morphemes are syntactically optional, making the neutral viewpoint always available in principle[64]". Further, Smith claimed that, "the use of an aspect marker always carries a certain emphasis not available in languages for which viewpoint is syntactically obligatory." Our data show that: (1) V-*le* marking is not always syntactically optional; (2) the absence of V-*le* does not always license the existence of neutral viewpoint; and (3) the explicit use of V-*le* does not always mean "emphasis".

Chinese native speakers consistently use V-*le* with accomplishment predicates and with all verb type categories without objects positioned at the end of a sentence. They also consistently leave V-*le* out with RVC predicates carrying a quantified or specified object. This pattern of consistent use of V-*le* disconfirms the claim that "viewpoints morphemes are syntactically optional."

Analysis of our native data suggests that when Chinese native speakers do not use *-le*, it is not because they judge *-le* "syntactically" optional as Smith claimed or that the events are not sufficiently bounded as Li and Thompson claimed, but because the use of *-le*

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[64] According to Smith (1997), "[The Mandarin Chinese …] with three perfectives, three imperfectives, and a neutral viewpoint. Viewpoints morphemes are syntactically optional, making the neutral viewpoint always available in principle. The presence of an explicit viewpoint morpheme always carries a certain emphasis not available in languages for which viewpoint is syntactically obligatory." (p. 263); and "[In Mandarin]…sentences that lack viewpoint morphemes (LVM sentences) have the Neutral Viewpoint. The viewpoint is open informationally…The interpretations are flexible but not unlimited." (p. 277)

would be semantically and lexically redundant. In other words, when speakers judge the events sufficiently bounded to the point that the perfectivity is apparent to hearers and the non-use of *-le* would not create any ambiguity, they would not use *–le.* Therefore, the absence of V-*le* in a RVC sentences (the most likely occurrence of non-use of *-le* based on our data) does not make the viewpoint neutral, and as a result is not informationally open for flexible interpretation such as an imperfective reading.

When Chinese native speakers use V-*le* explicitly, it does not always mean "emphasis". One can hardly interpret the consistent use of V-*le* with different accomplishment predicates by 96% to 99% of native speakers as "emphasis." When a native speaker supplies V-*le* in an optional context, the motivation of the user can be either "emphasis" or simply "viewpoint" based on the degree of the boundedness in the predicate.

In addition to our results concerning native knowledge on the use of V-*le*, we can also report our preliminary findings concerning S *le*. Though the focus of our investigation was on native use of V-*le*, the native data showed an unanticipated and intriguing pattern for S *le*. The obligatory context for S *le*, whether denoting inception, change of state, or enclosure, if not non-existent, seems to be limited or undetermined, contra the claims of many textbooks and grammar books (Liu, 2002; Liu et al., 2006; Ross, 2004; T'ung & Pollard, 1982; Yao, 1997; Yip & Rimmington, 2004; among others.) [65] The second unanticipated finding is that in our study, the adolescent native speakers as a group, had a

[65] Li and Thompson (1981) is one of the few exceptions for stressing that S *le* "is commonly used in ordinary conversation and at the same time is difficult for the students of Mandarin to master." (p.239), and "… to appear in a great variety of speech situation with an equally great variety of semantic implications, and no one has yet succeeded in tying these uses of *le* together to arrive at a general statement of its semantic and pragmatic functions in the language." (p. 239). However, they implied that certain uses of S *le* were obligatory by pointing out that when S *le* is used "in conveying the speaker's feeling that the statement s/he has made in his/her contribution to the contribution is particularly important for the language learner to internalize and be conscious of." (p.287) , and further "…omitting it is probably the most common error made by nonnative speakers." (p.288)

tendency to use S *le* more frequently than the adult native speakers. This might represent a potential shift of language use, whether limited to some functional words or a more general pattern of language use, among different age groups of native speakers.

We believe our data-driven conclusions can help us to further understand the semantic and pragmatic nature of the perfective marker V-*le*, and that they provide guidance for the design and coding of future experiments investigating V-*le*. We hope that these findings and the *Principle of Optionality* can contribute to making the perfective marker V-*le* more teachable and learnable, thus facilitating and shortening the process of its acquisition.

7.2 Conclusions and observations based on learners' data

We wanted to know how closely the adolescent classroom learners of L2 Chinese at the post-initial stage (after 300-400 hours of instruction) approximate the native use of V-*le* (and possibly S *le*). We also wanted to know whether we could describe the learners' knowledge about the marking of V-*le*. The objectives of this investigation were to determine: (1) How learners of L2 Chinese encode the perfectivity at the post-initial developmental stage; (2) How learners instantiate optionality of the use of V-*le* in written and spoken discourse; and (3) How learners of CL2 use sentence final *le* in their discourse. To accomplish these objectives, we conducted two different experiments with the learners and their native controls. One of the tasks, "A Trip to Beijing", a written and grammaticality judgment task, was the same one used with the 482 native speakers for our large survey discussed in the previous section. The second was a less controlled oral production task, retelling a popular Chinese fable although one unknown to the learners, "The Old Man and His Horses."

The findings from the two tasks were not identical but, instead, complemented each other. These differences led us to conduct a more comprehensive assessment of learners' linguistic competence and performance regarding the knowledge and the usage of perfective marker V-*le* and sentential S *le*.

In terms of OB V-*le*, the findings from the cloze task "A Trip to Beijing", which arguably assumes the participant to have meta-linguistic knowledge, suggested that the majority of the learners had acquired the knowledge of the perfective marking in the obligatory context. All six learners used -*le* consistently, like the natives in the large survey and their age-matched controls in this task. This was the case for all the ACC predicates (100% of correct suppliance) and for ACT-O as the first event in a sequence (100% of correct suppliance); 5 out of 6 learners used –*le* with ACH –Q time complement (83% of correct suppliance).

However, the findings from the story-retelling oral production task suggested that in spontaneous oral production, the average correct suppliance of V-*le* for learners' group was only 59.25%, far lower than the written results of 96.6% in cloze task. The more advanced Group 1 learners (those with 400 hours of instruction) performed consistently better than the less advanced Group 2 learners (those with 300 hours of instruction) across the two tasks. With respect to the correct use of obligatory V-*le*, the Group 1 learners scored 100% in "A Trip to Beijing" and 85.71% in "The Old Man and His Horses" while the Group 2 learners scored 93% and 40% respectively for those tasks.

Nevertheless, when we qualitatively examined the data of OB V-*le* from the oral production task for its error patterns (See Tables 6-8 and 6-9 in 6.3.1), we found that almost all the errors of undersuppliance (omitting -*le* in obligatory context) came from the same

source. The majority of learners (7 of 8) left out obligatory V-*le* for RVCs, the verb category that has telicity and punctuality inherently coded in it. Error samples include:

(1) you yi-tian, ta de ma pao-zou ***-le***
有 一 天， 他 的 马 跑 走 了。
have-one-day, he-DE-horse run-leave-PFV
One day the horse ran away.

(2) ji tian yihou, ta de ma hui-lai –***le***
几 天 以后，他 的 马 回 来 了。
several –day-after, he-DE-horse return-back-PFV
A few days later the horse came back.

(3) jiankang de nianqing ren qu da-zhang dai-zou ***-le***
健康 的 年轻 人 去 打 仗 带 走 了。
healthy –DE- young-people-go –fight-war take-leave-PFV
A war took the young men away.

We have assumed that the reasons for this undersuppliance were their implicit understanding of the semantic cues given by the RVCs—the second verb of these RVCs "*run away*" (run-leave),"*come back*" (return-come), and "*take away*" (take-leave) were all ACH verbs which had [+punctual], [+telic], and [dynamic] inherently encoded in them. What the learners had not yet acquired is that there are two rules governing the use of *-le* with RVCs, one with RVC carrying QO/SO, and the other with RVC+Ø.

Rule 1- when RVCs carry quantified or specified object, *-le* is optional.

ta shuai duan [*le*] *yi tiao tui*

he -fall -break- PFV- one-CL -leg

He broke a leg.

Rule 2- when RVCs (as well as ACHs) are positioned at the end of a sentence (mostly in a "topic comment" sentence), *-le* is obligatory.

ta ba tui shuai duan -le

he-BA-leg- fall- break- PFV

He broke the/his leg.

Viewed from this perspective, the undersuppliance of the obligatory V-*le* in oral production did not contradict the nearly perfect scores of the grammaticality judgment task, since learners supplied V-*le* to ACTs and monosyllabic ACHs with quantified or definite objects, and to ACTs as first action in a sequence. Taking a comprehensive view of the data, we found that the learners had a good understanding of the semantic properties of the verb class and had acquired a good, but not yet native-like, knowledge about the interaction between the perfective marker V-*le* and the lexical and semantic properties of different verb type categories. They marked perfectivity overtly with V-*le* to ACC predicates (ACT+ QO/SO, therefore lexically bounded) and to ACTs as the first event in a sequence (therefore syntactically bounded), but did not always mark the semantically bounded predicates, such as RVCs. The occurrence of optional non-use of V-*le* varies among different type of predicates, with RVCs being the most likely to reflect the optional non-use of V-*le*. From the patterns of learners' use of *-le* including both the correct suppliance and incorrect usage, they seemed to have the knowledge about optionality and its relationship to verb type categories, but had not yet internalized the various constraints associated with its application.

It is noteworthy that these findings contradict the central claims of the Aspect Hypothesis. The Aspect Hypothesis postulates that there is an intrinsic correspondence

between lexical [situation] aspect and grammatical [viewpoint] aspect. At the initial stages of acquisition, learners are claimed to tend to add perfective markers to achievement verbs and imperfective markers to activity and state verbs. The marking will gradually approximate the target usage of both perfective and imperfective markers to all types of verbs, with the advancement of their language proficiency. However, the learners in our study behaved and performed very differently from the prediction of Aspect Hypothesis for the marking of the perfective aspect in that they marked more ACT verbs than ACH verbs (RVCs).

The results from the two tasks were also quantitatively different in terms of the use of disallowed *V-*le*. The learners had a 35.4% oversuppliance for the cloze task "A Trip to Beijing", compared to 16.6% in the oral production task "The Old Man and His Horses." Comparing the rate of error for disallowed *V-*le* with the rate of correct suppliance of obligatory V-*le* across the two tasks, we initially got a conflicting and confusing picture. The learners performed significantly better with obligatory V-*le* in the cloze task, but much better with disallowed *V-*le* in the oral task.

Table 7-2
Omission and oversuppliance of V-le in two experimental tasks

	A Trip to Beijing (cloze task)	The Old Man and His Horses (oral spontaneous production task)
OB V-*le*	96.6% (3.4% omission)	59.25% (40.75% omission)
*V-*le*	65% (35% oversuppliance)	84% (16% oversuppliance)

Quantitatively, the learners' performance can be partially explained in terms of the mode of tasks. In a cloze task such as "A Trip to Beijing" where everything is organized and laid out in order, the learners of L2 rely almost exclusively on their meta-linguistic

knowledge to complete the task by supplying or leaving out certain functional words. Studies conducted by SLA researchers often find L2 learners tend to err on the safe side by oversupplying in this type of task. Our learners were probably not an exception to this behavior which would explain their oversuppliance of *-le* in the cloze task.

We have analyzed the obligatory V-*le* from a qualitative perspective in the previous section and suggested that the discrepancies reflected the learners' knowledge of how perfectivity is generally denoted for different types of verbs, as well as the lack of knowledge about how certain constraints are associated with different verb types. A qualitative analysis of the use of *V-*le* across two tasks will also help us to better understand these results.

The six learners were each confronted with 16 different tokens of possible disallowed *V-*le* context in the cloze task, but produced an average of only two different tokens each in the story retelling task. One contributing factor may have been the difference in sample sizes. The much larger quantity of total instances (96) in the cloze task may have resulted in more error opportunities than the error opportunities resulting from the smaller number of total instances (12) in the oral production task.

Furthermore, when we examined the error types in detail for the cloze task, we found that the errors mainly came from three sources (See Table 5-5 in 5.3.4):

(1) "say verb" predicates used in direct and indirect speech;

(2) cognitive/psych verbs that are not semantically bounded; and

(3) the 1st verb—usually "come" and "go" -- in a so-called "serial verb construction" utterances that mainly function as adverbials. There were two errors of adding V-*le* to the STA verb "to wait" that did not have a quantified object. There was also a single error of

adding V-*le* to the verb "to go" in the modifying clause "…boarded the plane *going to* Beijing" (坐上*北京*的飞机 [zuo-shang qu Beijing de feiji: sit-on go Beijing plane]. This is a rule that is usually taught explicitly to learners of L2 Chinese when they are learning the usage of V-*le* marking, along with other constraints associated with "say verb" predicates, psych verbs, and serial construction.

The learners used slightly more V-*le* in optional contexts than their controls in the cloze task (See Table 5-3 in 5.3.2.), but omitted V-*le* after most of the RVCs (8/10) in single-event sentences (See Table 6-10 and Table 6-11 in 6.3.2). This was a similar pattern to that found in the cloze task for OB V-*le.*

While the learners seemed to know the basic principles concerning the marking of V-*le* in obligatory and optional contexts and applied this knowledge in both written and oral tasks, they were not similarly proficient in the use of S-*le*. They either oversupplied S-*le* in disallowed contexts (designed as fillers) in the cloze task (See Table 5-5 in 5.3.4) or undersupplied it in the oral production task (See Table 6-6 in 6.2.5). These results are significant because, as an "attitudinal marker" (Li &Thompson, 1981; Yip & Rimmington 2004) in Chinese, the use of S *le* is closely related to the global language proficiency of the L2 Chinese learners. It reflects the pragmatic and discourse competency of the learners as they progress toward the native-like stages of the language acquisition.

7.3 Some reflections

These findings remind us of several important issues. First, the nature of the tasks may have had a significant impact on learners' performance. The tasks differed in how well they elicited learners' knowledge of specific linguistic forms, and how the resulting data were analyzed. Quantitative analyses and descriptive statistics give us an outline of

the landscape under investigation while qualitative or content analyses provide vital details needed to postulate more accurate and reliable hypotheses. If we had not looked at the individual items contributing to the results of the two tasks, it would have been impossible to conclude that, despite the error rate in obligatory V-*le* and disallowed *V-*le*, the learners actually had a rather good understanding of the intrinsic relationship between the situation aspect of verbs and the viewpoint aspect of the perfective marker V-*le*.

Second, the results suggest that we should always bear in mind when discussing the acquisition of any linguistic competency, that there are both competence and performance issues to be considered. The data from two tasks completed by the learners suggests that growth in competence in using V-*le* is incremental and parallel to the advancement of those learners' global linguistic knowledge.

Regardless of the differences in competence and performance found between the two groups, both groups of learners matched the form V-*le* to the concept of perfectivity best in the context of FES (first event in a sequence). This suggests that the acquisition of the V-*le* follows the well-attested patterns postulated by Bardovi-Harlig (2000) and Dietrich et al. (1995) that, at the early stages of the acquisition of aspect and tense markers, learners of L2 have a tendency to rely more on the chronological order of the syntactic structure as a pragmatic strategy rather than lexical, and later morphological strategies.

Finally, our observations from learners' data led us to conclude that the errors of V-*le* in our learners' data did not necessarily come from negative transfer or over-generalization, as claimed by the majority of research on the acquisition of V-*le*. Instead, we think that the errors of the six learners stemmed more from the lack of negative evidence that clearly spelled out all the "don'ts" for the use of V-*le*. However, neither

positive nor negative evidence on V-*le* will have any significant impact on learners until they internalize a large and varied vocabulary, a variety of syntactic structures, and a significant familiarity with idiomatic expressions in their mental lexicon. Thus, for learners who were at the post-initial stage of their Chinese language instruction, errors due to lack of global proficiency and negative evidence should not always be considered under the umbrella of "negative transfer" and "overgeneralization".

The various claims (Teng, 1999; Wen, 1995; Wen, 1997, among others) concerning whether V-*le* or S *le* is acquired first by learners of L2 Chinese is futile until we resolve the following issues:

(1) The entanglement of V-*le*, S *le*, and V-*le* + S *le*, when *le* is positioned at the sentence final position;

(2) The knowledge and consensus about the obligatory, disallowed, and optional contexts for V-*le*; and

(3) The knowledge and consensus about whether there are obligatory, disallowed, and optional contexts for S *le* based the research of native speakers' spontaneous oral speech data.

Further, while we can reach some preliminary conclusions about the issues we raised, it is still potentially misleading to claim a certain group of learners acquired a certain *le* (be it perfective or setential) before the othere one, and when such acquisition took place. As shown in our studies, learners acquire different uses of V-*le* (and probably S *le*) at different stages.

7.4 Pedagogical extensions

We know that the usage of a grammatical feature in written and spoken language does not entirely depend on its morphological form and syntactic position. Usage is also governed by intricate interactions and principled constraints at the semantic, prosodic and discourse levels. The perfective V-*le*, according to the research reviewed in Chapter 3, is probably one of the most difficult linguistic features of Mandarin Chinese to teach, to learn, and thus to acquire. Its complex linguistic nature is one of the challenges. But, the lack of knowledge about its complex nature and disagreement among linguists, researchers and Chinese language teachers resulting from this lack of understanding are also important factors.

Despite their disagreements on the acquisition order, undersuppliance and oversuppliance, and the interaction between situation types and viewpoint types, most of the influential studies on the acquisition of V-*le* and S *le* agree on one point. Unlike other grammatical features, the learning of V-*le* and S *le* usually starts at an early stage, but the acquisition of either takes the longest time to achieve in practice. Some L2 Chinese learners, provided they are conscientious students in a target-language environment, may have a better chance to shorten this process due to the large quantity of input they receive and output they produce on a daily basis in both spoken and written forms. Their constant interaction with native speakers of Chinese may help them to notice the gaps (Schmidt, 1990) between their non-native usage and the "Chinese way" of using V-*le* and S *le*, and therefore find themselves in an ongoing process that fine-tunes the correct usage of these two markers.

Learners of L2 Chinese in a non-target language classroom environment, such as the six learners in our study, face a different reality. They usually have a limited amount of time allocated for instruction (about 100 hours per school year) and, as a result, receive limited input from instructors and peers. There may be a wide variance in the quality and accuracy of the instruction they receive in general, and on aspectual markers and other related linguistic forms in particular. They produce very little output, and what is produced is often in modified or simplified structures and basic vocabulary. The sentential *–le* usually appears in their interlanguage earlier than the perfective marker V-*le*, since there are many opportunities to use this marker to signal a "currently relevant state" in a middle or high school classroom setting. Some common examples include *Shang-ke le*! (attend-class *le!—It's time for class now!*), *Gai ni le!* (should be-you *le!—It's your turn now*), or "change of state", such as: *Bu yao shuo-hua le!* (NEG-should-speak *le!—Stop talking now!*).

The perfective marker V-*le*, unlike S-*le* that can be added to a variety of sentences, needs to be used in the right situations with correct verbs and syntactic structures. This is usually introduced after 150-200 hours of class instruction along with tone and pronunciation drills, vocabulary and phrase building, and character writing.

The challenge of how to get L2 learners from beginners to become more proficient users of a target language has always been the central concern of second language acquisition studies. While we have to respect the internal syllabus of the learners and their individual styles of learning and learning differences, a clear and competent instructional program is critical to speed the rate of acquisition globally, and support the acquisition of some of the harder-to-use linguistic forms such as V-*le*.

An early introduction of concept building would help learners to avoid the potential confusion between English past tense and Chinese perfective aspect. Examples of the concept of boundedness that is the essence of the perfectivity should be introduced in different situational contexts with different verb types. The key concepts of obligatory contexts such as those in our hypotheses should be introduced and reinforced with form-focus instruction (Doughty & Williams, 1998) before introducing a list of the disallowed contexts. After learners have developed a firm grasp of the obligatory and disallowed conditions and can adequately operationalize in their spontaneous spoken and written productions, the concept of optionality should be introduced. The learning of the optionality is a much longer process than the learning of the obligatory and disallowed contexts, as the former is viewpoint-based and the latter rule-based. For viewpoint-based optionality, meta-linguistic knowledge or awareness will not be sufficient to facilitate acquisition. Instead, classroom instruction needs to incorporate more interactive activities that create different situational contexts designed for introducing and practicing specific target use of V-*le.*

Apart from concept building, rule explaining and situational practice, the introduction and learning of formulaic constructions containing V-*le* and S *le* will also be helpful and effective. We have given examples of several formulaic expressions containing S *le* commonly used in classroom and suggest that they be used frequently as input and output. Just like S *le*, formulaic expressions containing V-*le*, such as *I understood* (我听懂了[wo ting-dong *le*: I- listen-understand-*le*], or *I finished writing* (我写完了[wo-xie-wan-*le*: I-write-finish- *le*], should be used frequently as part of classroom exchanges, and as positive evidence for the obligatory use of V-*le*.

We have pointed out that the process for the acquisition of V-*le* is incremental and parallel with the advancement of language proficiency, as its use is interactive with and related to prosodic awareness, syntactic structures, vocabulary size, and semantic competence and discourse functions. In native speech, V-*le* is often used in lexically and syntactically complex structures such as topic the prominent *ba sentence*, the passive voice *bei* sentence and complex directional complements. Ultimate competency in the use of V-*le* cannot be achieved until learners have internalized a large repertoire of vocabulary within a relatively complete system of syntactic structures. We hope the findings of this study contribute not only to the understanding of the linguistic function of V-*le*, but also to its teachability and learnability in classroom instruction.

7.5 Final words

While we believe that we have contributed to the field of linguistic and acquisitional research on the Chinese perfective marker –*le*, we also realize that there were limitations with our studies. As the focus of our study was on the perfective marker –*le*, we designed our research tools specifically to address our research questions. Since the sentential final –*le* is closely associated with the perfective –*le*, we also analyzed and discussed some of its most significant traits when our data were adequate. Further investigations are necessary, particularly with tasks designed to elicit S *le*, or using natural oral production corpus, to better understand whether there are truly obligatory uses of S *le* at the discourse level. In addition, further investigations with different modes of tasks are also necessary for testing the hypotheses we have advanced based on the native speakers' data.

APPENDICES

Appendix 1: Cloze task *“A Trip to Beijing”*

去北京旅行

去年我爸爸在中国工作 ____ ，所以我跟 ___ 我妈妈决定 ____ 去 ____中国旅行 ____ ，这样可以去 ____ 看看 ____ 爸爸 ____ ，也可以看看 ____ 中国人平常的生活情形 ____ 。我先从纽约坐 ____ 火车 ____ 回 ____ 波士顿的家____ ，在那里跟妈妈见 ____ 面 _____，然后我们一起从波士顿坐上 _____去北京的飞机 ____ 。我们在东京停 _____ 两个钟头 _____，第二天早上六点到_____ 北京 _____。一出 _____ 飞机场 ____ ，我们就看到 ____爸爸 _____在 出口的地方等 ____ 我们 ___ 。我很高兴 ____ ，赶快跑过去 ____ 跟他说 ____话 ____。爸爸问 ____我们累不累 ____ ，饿不饿____。我告诉 ___ 他我不累 ___也不饿 ____。我说___：“我们在飞机上睡 ___ 五个钟头的觉 ___，吃 ___三顿饭___ ，还看___ 两部电影 ___。现在就想 ___看看 ___ 天安门广场 ___。” 爸爸听 ___ 我的话 ___ 就说 ___：“好吧 ，那么我们就先回 ____家____ 吧！放下 ___ 行李 ___ 我们就去 ____。”我们就一起坐 ___ 爸爸的车回 ___ 他 北京的家____。

Appendix 2: Coded sample of cloze task with translation in English

Note: Since the word order in English is different from that of Chinese, sometimes the S-le does not appear at the end of the utterance in English. The majority of *V-le and *S-le were mostly "fillers". Since it is difficult to determine disallowed *V-le and *S-le from fillers as both categories were judged ungrammatical, we coded all the ungrammatical V-le and S-le as both fillers and disallowed markers (*).

The task was coded as follows:

obligatory V-*le*: [le]$_{v14}$ optional V-*le*: [ ]$_{v23}$ * V-*le* or filler: [*] $_{f/v6}$

obligatory S *le* : [le]$_{s60}$ optional S *le*: [ ]$_{s9}$ * S *le* or filler: [*] $_{f/s13}$

去北京旅行 *A TRIP TO BEIJING*

去年我爸爸在中国工作[ ]$_{s1}$，
Last year my father <u>worked</u> [ ]$_{s1}$ *in China,*

所以我跟我妈妈决定[*] $_{f/v2}$ 去[*]$_{f/v3}$ 中国旅行[*]$_{f/s4}$，
so my mom and I <u>decided</u> [*]$_{f/v2}$ *to* <u>go</u> [*]$_{f/v3}$ *to China and to <u>travel</u>* [*]$_{f/s4,}$

这样可以去[*]$_{f/v5}$ 看看[*]$_{f/v6}$ 爸爸[ ]$_{s7}$，
so that [we] could <u>go</u> [*]$_{f/v5}$ *<u>visit</u>* [*]$_{f/v6}$ *Dad* [ ]$_{s7,}$

也可以看看[*]$_{f/v8}$ 中国人平常的生活情形[ ]$_{s9}$。
(and we) also could <u>see</u> [*]$_{f/v8}$ *Chinese people's daily life* [ ]$_{s9}$.

我先从纽约坐[*]$_{f/v10}$ 火车[*]$_{f/s11}$ 回[ ] $_{v12}$ 波士顿的家[*]$_{f/s13}$，
I first took [<u>sat</u> [*]$_{f/v10}$ *on] train* [*]$_{f/s11}$ *from New York and <u>went back</u>* [ ]$_{v12}$ *to home in Boston* [*]$_{f/s13}$.

在那里跟妈妈见[?le]$_{v14}$ 面 [*]$_{f/s15}$，
After <u>meeting</u> [?le]$_{v14}$ *with Mom* [*]$_{f/s15}$ *there,*

然后我们一起从波士顿坐上[ ]$_{v16}$ 去[*]$_{f/v17}$ 北京的飞机[*]$_{f/s18}$。
we then together <u>sat on</u> (flew) [ ]$_{v16}$ *the plane* [*]$_{f/s18}$ *from Boston to [<u>go</u>* [*] $_{f/v17}$ *toBeijing.*

我们在东京停[le]$_{v19}$ 两个钟头[*]$_{f/s20}$，
We <u>had stopped</u> [le]$_{v19}$ *in Tokyo for two hours* [*]$_{f/s20}$

Appendix 2: Coded sample with translation in English (continued)

第二天早上六点到 [?le]$_{v21}$ 北京[*]$_{f/s22}$。
(and) we <u>arrived</u> [?le]$_{v21}$ *at 6:00 the next morning in Beijing* [*]$_{f/s22}$.

一出[ ]$_{v23}$ 飞机场[*]$_{f/s24}$，
As soon as we <u>got out of</u> [ ]$_{v23}$ *the airport* [*]$_{f/s24}$,

我们就看到[ ]$_{v25}$ 爸爸[*]$_{f/s26}$ 在出口的地方等[*]$_{f/v27}$ 我们[ ]$_{s28}$。
we <u>saw</u> [ ]$_{v25}$ *Dad* [*]$_{f/s26}$ *<u>waiting</u>* [*]$_{f/v27}$ *at the exit for us*[ ]$_{s28}$.

我很高兴[*]$_{f/s29}$,
I was so happy (upon seeing him) [*]$_{f/s29}$

赶快跑过去[*]$_{f/v30}$ 跟他说[ ]$_{v31}$ 话[*]$_{f/s32}$。
[that] I immediately <u>ran towards</u> [*]$_{f/v30}$ *him and <u>spoke</u>* [ ]$_{v31}$ *with him* [*]$_{f/s32}$.

爸爸问[*]$_{f/v33}$ 我们累不累 [*]$_{f/s34}$，饿不饿 [*]$_{f/s35}$。
Dad <u>asked</u> [*]$_{f/v33}$ *us [whether] we <u>were tired</u>* [*]$_{f/s34}$ *or <u>hungry</u>* [*]$_{f/s35}$.

我告诉[*]$_{f/v36}$ 他我不累[*]$_{f/s37}$ 也不饿[*]$_{f/s38}$。
I <u>told</u> [*]$_{f/v36}$ *him [that] I <u>was not tired</u>* [*]$_{f/s37}$ *and not hungry* [*]$_{f/s38}$.

我说[*]$_{f/v39}$: “我们在飞机上睡[le]$_{v40}$ 五个钟头的觉[*]$_{f/s41}$，
I <u>said</u> [*]$_{f/v39}$: *“We <u>slept</u>* [le]$_{v40}$ *for five hours* [ ]$_{f/s41}$ *on the plane,*

吃[le]$_{v42}$ 三顿饭[*]$_{f/s43}$，还看[le]$_{v44}$ 两部电影[*]$_{f/s45}$。
(and) <u>ate</u> [le]$_{v42}$*three meals* [*]$_{f/s43}$ *and <u>saw</u>* [le]$_{v44}$ *two movies* [*]$_{f/s45}$.

现在就想[*]$_{f/v46}$ 看看[*]$_{f/v47}$ 天安门广场[ ]$_{s48}$。”
All I <u>want</u> [*]$_{f/v46}$ *now is to <u>see</u>* [*]$_{f/v47}$ *the Tian-An-Men Square* [ ]$_{s48}$.”

爸爸听[le]$_{v49}$ 我的话 [*]$_{f/s50}$ 就说[*]$_{f/v51}$：
After <u>having heard</u> [le]$_{v49}$ *those words* [*]$_{f/s50}$, *Dad then <u>said</u>* [*]$_{f/v51}$*:*

“那么我们就先回[*]$_{f/v52}$ 家[*]$_{f/s53}$ 吧！
“In that case, let’s <u>go</u> [*]$_{f/v52}$ *home* [*]$_{f/s53}$ *first.*

放下[ ]$_{v54}$ 行李 [*]$_{f/s55}$ 我们就去 [ ]$_{S56}$。”
We will go [ ]$_{s56}$ *(there) after putting down* [ ]$_{v54}$ *the* luggage [*0]$_{f/s55.}$”

我们就一起坐[ ]$_{v57}$ 爸爸的车[*]$_{f/s58}$ 回 [ ]$_{v59}$ 他北京的家 [le]$_{s60}$。
We then all <u>sat</u> [ ]$_{v57}$ *in his car* [*]$_{f/s58}$ *and <u>went back</u>* [ ]$_{v59}$ *to his Beijing’s home* [le]$_{s60}$

Appendix 3: Distribution of obligatory, optional and disallowed V-*le* and S *le* in *A Trip to Beijing*

category	tokens	tokens
V-*le* OB	7	V14, V19, V21,V40, V42, V44, V49
V-*le* OP	8	V12, V16,V23,V25,V31,V54, V57,V59
S *le* OB	1	S60
S *le* OP	6	
* V-*le*	15	V2,V3,V5,V6,V8,V10,V17,V27,V30,V33,V36,V39,V46,V47,V52
*S *le*	28	(S1, S7, S9, S28, S48, S56) S4, S13, S15, S18, S20, S22, S24, S26, S29, S32, S34, S35, S37, S38, S41, S43, S45, S50, S51, S53, S55, S58

Appendix 4: Distribution of verb classes with OB V-*le* in *A Trip to Beijing*

ACC: 5 tokens ACH: 2 tokens

V14	saw each other's (face), then , 见了面, 然后…	ACH+ CO (1st event in a sequence)
V19	stopped for 2 hours, 停了两个钟头,	ACH +QO→ ACC (1st event in a sequence)
V21	arrived in Beijing . 到了北京。	ACH +SO (monosyllabic ACH)
V40	slept for 5 hours 睡了五个钟头	ACT+QO→ ACC
V42	ate 3 meals 吃了三顿饭	ACT+QO→ ACC
V44	watched 2 movies. 看了两部电影。	ACT+QO→ ACC
V49	heard what I said (my words), then … 听了我的话就…	ACT+SO→ ACC (1st event in a sequence)

Note: CO=cognate object QO=quantified object SO=specified object

Appendix 5: Distribution of verb classes with OP V-*le* in *A Trip to Beijing*

ACH: 3 tokens ACT: 2 tokens RVC: 3 tokens

V12	returned (home) 回了波士顿的家	ACH (monosyllabic ACH) + SO
V16	boarded the plane 坐上了去北京的飞机	RVC (ACT+ ACH)
V23	as soon as (we) got out of the airport 一出了飞机场	ACH (monosyllabic ACH) + SO
V25	saw Dad immediately 就看到了爸爸	RVC (ACT+ ACH) + SO
V31	Spoke (words) with him 跟他说了话	ACT (V+ cognate O)
V54	after putting down the luggage 放下了行李	RVC (ACT+ ACH)
V57	sat/ride on (in Dad's car) to hotel 坐了爸爸的车去...	ACT+ SO (in a serial verb construction)
V59	returned (home) 回了他北京的家	ACH (monosyllabic ACH) + SO

Appendix 6: Distribution of verb classes with *V-*le* in *A Trip to Beijing*

STA: 3 tokens ACT: 7 tokens ACH: 4 tokens RVC: 1 token

V2	decided [*] 决定 [*]	ACH
V3	to go 去 [*]	ACH
V5	could go [*] 可以去 [*]	ACH
V6	could visit [ ] Dad 可以看看[*] 爸爸	ACT
V8	could see [*] 可以看看[*]	ACT
V10	took [*]the train to… 坐[*]火车回….	ACT (V+ unspecific O)
V17	bound for [*]Beijing 去[*]北京的飞机	“STATE” (ACH in a modifier)
V27	waiting [*]for us 等[*]我们	STATE
V30	ran over [*] 跑过去[*]…	RVC (ACT+ACT+ACH) in a serial-verbal construction
V33	Dad asked [*]us… 爸爸问[*]我们	ACT (“say” verb)
V36	I told him 我告诉[*]他	ACT (“say” verb)
V39	I said [*] 我说[*]	ACT (“say” verb)
V46	all I want [*]now 我现在就想[*]	STATE
V47	all I want to see [*]now 我现在就想看[*]	ACT preceeded by a psych verb
V51	Dad listened to me, then said [*] 爸爸听了我的话就说[*]	
V52	let's go [*]home first 我们先回[*]家	ACH (monosyllabic ACH) + CO

Note: in V30- ran over [*] 跑过去[*], -*le* can be optionally attached to the ACT “to run”

Appendix 7: The English version of "The Old Man and his Horses" (partial)
(Taken from a children's book)

The old man's answer surprised them. "But how do you know it's bad?" he said.

A few days later his horse came back. With it were two wild horses. Now the old man had three horses. When the neighbors saw this, they congratulated him on his good fortune.

"But how do you know it's good?" he said.

The next day, while attempting to break in one of the wild horses, the man's son fell off and broke his leg.

Once again the neighbors came to express sympathy. "Such bad luck!" they commiserated.

"But how do you know it's bad?" the old man asked them.

The neighbors looked at him in disgust. Was he crazy? They decided not to have anything more to do with him.

The next day a warlord came through the village and took all the able-bodied young men off to war.

All but the old man's son.

Appendix 8: Transcript of Learners' Story "*The Old Man and His Horses*"

Learner 1

很久以前在中国住了一个旧男生，老人，对人生的看法很奇怪。他从未做快的 judgments 怎么好。 他的 philosophy 是 "等着看"。 一天，老人的马跑走了(跑走了-correcting his tones himself)。因为只有这匹马，所以他的邻居觉得很抱歉，跑来安慰他这个坏运。他们摇着头说："真不幸！"老人的回答惊奇他们， "怎么知道这是一个坏运？！"几天，他的马带回来两匹马，现在老人有三匹马。邻居看到了老人现在有三匹马，他们跑来恭喜他。只是老人说，你（们）怎么知道这是一个好运？明天，第二天，骑着马，老人的儿子从马上摔下去，摔断了一条腿。邻居又跑来安慰她，说，真不幸！可是老人问他们，你们怎么知道这是一个坏运？邻居看着他，很奇怪，觉得他发疯了（发疯了吗？）他们觉得他们不要跟他讨论。第二天，一个战争来了，村子把健康的男年轻人都带走了去 war。除了老人的儿子以外，他能留下来， 因为他摔 断了一条腿。 XXX 说完了。

Learner 2

这是塞翁失马， 是一个好故事。 很久以前，有一个老人，老男人，他的看法跟村子人不一样。 他总是不（meant: 从不， 总不）很快决定什么事是好不好。 他的看法是-等着看。有一天，老人的马跑走了，他只有一匹马，所以他的邻人觉得很抱歉，他们很快告诉他，哦，糟糕！他们说很糟糕。老人的回答很…surprising 怎么说..surprising…很惊奇他们…让他们很惊奇。 他说，你怎么知道是不好的坏运？ 几天后，他的马回来了，还有两匹野马。 现在老人有三匹马。邻人看的时候，他们恭喜他。你怎么知道是好的运气？第二天，骑野马的时候，骑着马，老人的儿子摔下去。。。 摔腿。。。邻人又觉得很抱歉，他们说是不好的运气，老人又说， 你怎么知道是不好的坏运？ 邻人觉得他发疯了。他们决定不要帮助他。第三天，将军来他们的村子，来了他们的村子，带健康的男人，年轻人， 去别的地方， 除了老人的儿子以外。

Learner 3

在古老的中国有一个老人，他的人生的看法跟村子人不一样。 他从未决定什么事好不好，他的哲学是等着看。 有一天，老人的马跑走了，因为这匹马是他. . . . 因为他只有这匹马， 所以他的邻居跑来安慰。他们说，糟糕，这是坏运。 他们摇着头说，真不幸。可是老人让他们很惊奇，说，你（们）怎么知道是坏运？几天后，这匹马回来，带来两匹野马，现在老人有三匹马。邻居看着这个事的时候， 他们恭喜他，可是他说， 你（们）怎么知道这是好运？ 第二天，他的儿子骑野马。他的儿子骑着马，从马上摔下来，摔断一条腿。邻居又跑来说，很不幸，可是老人说，你们怎么知道是坏运？邻居说他很奇怪，想：他发疯了吗？他们决定不要跟他说话。第二次，一个战争来村子，把健康年轻人都带走了，可是老人的儿子没去， 他能留下来。

Learner 4

很久以前，一个老人他的看法不是跟别人一样。他没做几次以前，他告诉他们，等一下再看，等着看…他对人生的看法不一样。有一天，老人的马跑走，因为他这匹马跑走，他的邻人告诉他，他们说这是坏运，可是老人的回答很吃惊，他说，可是你（们）怎么知道这是坏运？他问。

几天以后，他的这匹马回来，跟这匹马有两个带回来马， 现在老人有三匹马。邻人看的时候，他们说，祝贺你。 可是老人说你（们）怎么知道这是一个好运？第二天他的儿子落下，和摔一条腿，因为他想训练一匹带回来(的)马。 又来邻人去看老人，说，对不起。老人告诉他们，可是你（们）怎么知道这是一个坏运？邻人看着他，觉得很厌恶，他们决定不看老人。第二天一个将军来他们的村子，来了以后他带走所有的健康年轻人到…打仗。可是他不带走老人的儿子，因为老人的儿子摔腿。

Learner 5

有一天，有一个老人，他对人生的看法跟别人的不一样。他没做一件，没想到是好或者不好。有一天，老人的马跑走了。这匹马是老人的只（meant:唯一的一）匹马， 所以他的邻人有同情，他们很快来老人家說对不起，他们说什么一件是不幸（WHAT AN UNFORTUNATE EVENT!），可是老人不想，他说， 怎么知道是不好？ 几天以后，老人的马回来，这匹马来跟两别的未驯服的马。 现在老人有三匹马。 他的邻人看到了以后，说，很好。可是他问他们怎么知道是好。 第二天老人的儿子摔断，摔断了他一条腿，老人的邻人又来，因为他们有同情，可是老人又问他们，怎么知道是不好。老人的邻人想他是发疯了。第二天健康的年轻人去打仗带走，可是老人的儿子没可以去。

Learner 6

很久以前，有一个老人，他的人生看法跟别的人不一样。 他的原则是：等和看！ 他的马跑走， 他只有这匹马，所以他的邻人同情他。他们说这是不幸！老人的回答让他们很吃惊—可是， 你（们）怎么知道这是不幸！ 几天以后，他的马回来。他马跟两匹马回来，它们是野马。 林人看了以后，他们说， 祝贺你。可是你们怎么知道这是幸？ 老人的儿子骑马的时候，从马上摔下去，他摔断一条腿。又邻人来同情老人，可是老人说，你怎么知道是不幸？ 他们看着老人，觉得很讨厌。老人很 XXX 了吗？ 第二天一个将军来村子，他带每个健康的年轻人去打仗，可是他没带老人的儿子。

Appendix 8: Transcript of Native Speakers' Story "*The Old Man and His Horses*"

Native speaker 1

以前在边塞住了一个老人， 所以叫做塞翁。有一天他的唯一的一匹马不见了..自己跑丢了。他的邻居对此非常感到可惜， 就来。。就全部来劝导这位老人，可是这个老人却说马丢了也不失为一件好事。。马丢了也不见得是一件坏事。他的邻居听了就非常地吃惊。然后过了几天，他的那匹马居然回来了，并且还带了两匹野马，一阵（？meaning：一起？）回来的。 就是。。（ME: 大家都很奇怪，然后他们又都来怎么样？）他们又来庆贺他，向他祝贺，但是塞翁又说， 这也不一定是一件好事。然后又过了一天，他的儿子因为要驯服其中的一匹野马而摔到地上。。摔到那个腿。(ME :摔到地上以后怎么样？摔…)摔断了一只腿 （ME：摔断了一条腿）。然后嘛。。他的邻居又来安慰塞翁，说。。就是说了一些话。 塞翁就说， 虽然摔断了一条腿， 也不失为一件好事。又过了几天，(ME：他的邻居一定更纳闷了，觉得这个老头真发疯了，是吧？）嗯，是的。然后又过了几天，朝廷来征兵打仗，然后村子里年轻，还有身体特别好的男丁全都被抓去打仗了，而且战争非常残酷，（他们）基本上都死了，可是老翁的儿子因为摔断了一条腿而幸免于难，然后就在家里安静地生活 （？了？着？ø）。

Native speaker 2

从前有一位老人，他只有一匹马。（我：他住在什么地方？）这记不清了。 （住在中国北方边界，所以才叫塞翁， 对吗？）对。 有一天，他那只马丢失了。 （我：你说一只马呀？）一匹马。 一匹马。一匹马丢失了 。（我：丢失了是什么意思？ 这匹马。。。）这匹马 跑了。跑了以后这个老人非常着急， （我：老人非常着急？）塞翁非常着急，然后他们邻居劝他不要这么着急。 过了几天。。。（我： 好像不是这么回事儿！这匹马跑了， 他自己不着急，因为他的哲学是咱们 wait and see ，咱们慢慢走着瞧，反而是他邻居跑来安慰他）。。来慰问他（我：然后他怎么回答？ ）他就说 ，不急，不急，（我：他说不急不急， 因为反正你们怎么知道是 。。。）是丢失了还是怎么了，是好事还是坏事。然后，过了几天，那匹马又带了两匹马回来。然后呢他的儿子（我： 邻居又为他。。）邻居又为他高兴了。 他呢也没显示出非常兴奋的样子，邻居也觉得很奇怪嘛。他还是那个观念，就是 wait and see， 就是咱们慢慢地看。这时候他儿子骑他的马，不小心摔下来了，就是把他的腿 …（我：他的儿子去骑那匹马？）骑那匹马我不记得了(我：他不是要去 break in 吗？ 去驯服吗？ 驯服是野马嘛！)对，对， 驯服野马。就是骑上马，摔下来，把腿摔断了。这他的还是为他

着急嘛，就说，唉儿子 腿摔断了，那该怎么办呢？ 那个老人呢还是用无所谓的态度说， 没关系, it's OK, 大概就是这个意思。 （邻居都觉得他很奇怪，对不对？就决定都不要…）再理他。（我：请你再说一遍。）听了老人的话以后，邻居觉得非常奇怪， 大家都决定不再理他了。 接下来就是。。。过了不久啦，国家。。政府里边。。就是官员嘛开始征兵，希望让所有的男丁去打战…打战…（打仗）打仗。对。老人的儿子因为腿摔断了，所以就没有去。可是过了。。 打完了战（！）以后，带来的消息是，所有的战士都仗（！）死沙场。 因为他的儿子没有去嘛，所以幸免，没有去，他很幸运。就是…他的邻居嘛，都来欢呼。老人嘛还是以他很平常的态度去对待。 所以这个故事就是说，塞翁失马，焉知非福。焉的意思就是怎么，就是怎么知道是福还是祸呢。（我：你说的很对。刚才你说的一句话很有意思。你说，所有的壮丁都战死沙场了。 战死的意思就是. .）都在战争中战死了，或者是说牺牲了。

Native speaker 3

在很久很久以前，有一个人他养了一匹…哦…. 他有一匹马， 很喜欢骑马。 有一天，他就去 。。。和他朋友去骑马。在路上，不小心…很激动嘛…喜欢骑马…. 骑马的时候不小心把退给摔断了（对…可是 开

始的时候…）有一天，有一匹马逃出来了，他就去追。。。他就去寻找，也没有找到，他的邻居都来安慰她，说真不幸啊，你的马跑了，不见了。他就说 你们怎么知道这件事是不好的呢？邻居听了都很纳闷了， 觉得怪怪的，马跑了怎么还说不是一件坏事呢？ 结果第二天呢，那匹跑走的马又回来了，而且还带了两匹野马回来。他的邻居就过来祝贺他，说这件是一件好事啊，你的马带了两匹野马回来。 然后他就说你们怎么知道这是一件好事呢？邻居更纳闷了， 明明是一件好事怎么会说成不是一件好事呢？结果到了老头的儿子去驯服这匹马的时候， 他不是喜欢骑马吗，所以去驯服野马，然后就骑着野马出去了，结果一不小心，因为野马比较难驯服，结果他一不小心，骑马时从马身上摔了下来，结果拔腿给摔断了。结果周围的邻居一起去安慰老头子说，真不幸啊，骑马把腿摔断了，家里就残子了， 结果老头子说，这并不是一件坏事，你们怎么知道这不是一件好事呢？邻居就更更 纳闷了， 说奇怪了，这个人怎么这么奇怪，这个人糊涂了…就决定不理他了。结果呢，在打仗嘛，古时候经常打仗，结果就开始抓壮丁，因为人死了很多了，就开始去抓壮丁。结果由于他儿子呢，腿断了，不能当兵了，逃过了这一劫，保住了自己的生命。 这就是 “塞翁失马，焉知非福。”

Native speaker 4

整个故事主要讲的主要是一个老翁， 他有一个儿子。他家里有唯一的一匹马。那匹马有一天 （这个儿子喜欢怎么样？）这个儿子喜欢马，而且喜欢驯服马。他家这匹马，而且是唯一的马有一天不见了，就是跑了出去不见了。然后人家都来说，塞翁，你家的马丢了，是一个不好的事情，就是相当于祸一样的事情。没想到第二天… 塞翁说，有可能丢了这匹马或许是件好事…你们怎么知道这是一件坏事？他那匹马第二天 又带了两匹野马回来，邻居又说这是一件好事，可是塞翁问他们怎么知道这不是一件坏事。然后他儿子因为特别喜欢喜欢驯服马，所以第二天 为了驯服马， 骑着这匹马出去，然后不小心从马上摔了下来。他的腿就受伤摔断了。结果邻居就说， 果然是一件坏事。然后 塞翁就说你们怎么知道这是一件坏事？然后，由于那个时候是战争年代，所以要征兵，所有人都被征过去了，由于他儿子腿受伤，所以没有被征过去，好多人都死在战场上面，可是塞翁的儿子没有，因为他留了下来。所以说“塞翁失马， 焉知非福”。

Native speaker 5

有一户人家， 大概是住在边境吧，所以叫做塞翁。他家有一匹马，有一天这匹马就跑到边塞外边去不见了。大家都来安慰塞翁，就说，你马

失踪了，真不幸啊！ 算是安慰他。塞翁说，马虽然失踪，可是。。。就是不以物喜，不以己悲吧。 就是说， 你们怎么知道这是一件坏事呢？ 邻居听了都觉得很纳闷。 过了几天，这匹马从边境外好像又带了一匹马回来（不止一匹吧？）。我好像记得它带了异性的马回来。这时候村里人 都很惊讶，又向塞翁祝贺。 塞翁又回答说， 这并不一定是一件好事。 有一天， 他儿子就骑这马去玩， 不慎从马上跌落摔就摔断了腿。这时村民就又来安慰他， 说腿虽然摔断了，不要伤心啊。 这时塞翁又说，这不一定是一件坏事啊。 后来不知道是过了几天还是几年， 记不清了，反正要打仗了，国家要征兵，周围的壮年男子， 就是壮丁， 就都被拉走了，被迫去打仗了。很多人都失去了宝贵的生命。塞翁的儿子保住了性命。因为腿瘸了，没被征去当兵，所以就保住了生命，这就叫做“塞翁失马，焉知非福”。

Native speaker 6

有一天有一个叫做塞翁的人，他家唯一的一匹马跑不见了，他十分着急。他是怎么找都找不到，然后别人都劝他说不要找了，他也就听了别人的话。邻居安慰他说你马不见了，真是遗憾…然后是第二天他发现马回来了，还带回来了两匹野马。大家都很高兴，邻居又都跑来向他

说了一些庆祝的话。塞翁说这不一定是一件好事。 邻居听了就觉得他这个人的想法好像跟别人的都不太一样。然后是， 塞翁的儿子想驯服这两匹野马，可是在骑的过程中不小心从马背上摔下来，把腿摔断， 摔断了腿。然后邻居觉得他说的还是有一定的道理。邻居又都来劝慰他，说真不幸。塞翁说，你们怎么知道这是一件坏事呢？邻居听了觉得更奇怪了，觉得他怎么会说出这样的话来。 然后是， 不久之后，又军队来征兵，因为他儿子的腿摔断了，所以就没被征去从军。 结果在战争之中死了很多人，塞翁就很庆幸他儿子没有被征兵去，邻居也都很庆幸这件事。 所以“塞翁失马，焉知非福”就是事情总有好的坏的一面，不一定好的一面就会伴随着坏的一面而来。 （你觉得塞翁的儿子保住性命的原因在哪里？）是因为他骑马摔断了腿，所以没有被征兵。

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