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**THE ACQUISITION OF TEMPORALITY BY ADULT SECOND LANGUAGE
LEARNERS OF CHINESE**

by

Jun Yang

A Dissertation Submitted to the Faculty of the
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entitled The Acquisition of Temporality by Adult

Second Language Learners of Chinese

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ABSTRACT

This dissertation is about the acquisition of temporality in the Chinese language by adult native English speakers. The major objective is to chart the course of development of temporality by adult English-speaking learners of Chinese and explore the universals in the acquisition of temporality.

The dataset used for this dissertation study consists of the Pear Story narratives produced by twenty native speakers of Chinese and the Pear Story narratives produced by twenty-one English-speaking adult second language learners of Chinese, grouped into three different proficiency levels – the low, the intermediate and the high level.

It is found that both native speakers of Chinese and adult learners have available at their disposal a repertoire of explicit and implicit encoding devices in which grammatical means is among the least often used. However, in comparison with native speakers, learners' repertoire is smaller and contains less varied items. Regarding the use of a particular aspectual particle, perfective *le*, it is found that both native speakers and learners are constrained by multiple factors. However, some factors affecting native speakers have not been acquired by learners yet and even the same type of factors affecting both native speakers and learners have different constraining strengths for the two groups.

Clear developmental patterns are found in learners' acquisition of temporality in narrative discourse. As learners gain proficiency in the target language, they grow from preferring implicit encoding to preferring explicit encoding, their use of grammatical means increases against lexical means, and their reliance on the discourse context

decreases. These universal developmental patterns are observed in both the foreground and the background clauses.

What is found in this analysis highlights the role of input, as most of the development tendencies reflect the grammar and language use by the native speakers. However, there is evidence that L1 transfer could additionally play a role in learners' acquisition of some temporal properties of the target language.

The implications of the findings of this study for the teaching of Chinese as a second language and for the acquisition study of aspectual particles in Chinese will also be discussed.

Chapter I INTRODUCTION

Time and space are semantic universals (e.g. Wierzbicka 1996). Since time is a universal concept of human experience, all languages necessarily represent time, although they may have different perceptions of time and the linguistic means may differ across languages. The universality of temporality in natural languages means that learning how to encode temporality in a second language is a necessary part of second language acquisition.

This dissertation is about the acquisition of temporality in the Chinese language by adult native English speakers. The major objective is to chart the course of development of temporality by adult English-speaking learners of Chinese. It will investigate the strategies employed by adult second language learners to express time in discourse, including both semantic devices and discourse pragmatic devices. It will also explore the role of semantic universals of time and the particulars of the linguistic realizations of temporality in Chinese and English in the acquisition of time in Chinese by English speakers. Finally, because most SLA study of temporality involves target languages with explicit grammatical morphology, the present research focuses instead on a target language that does not have verbal inflections and thus contributes to a broader, more balanced picture of developing representations of time.

PROBLEM

Little study of the L2 acquisition of time in a language without verbal inflections has been done due to the so-called Inflectional Paradigm Bias (Klein 1993), which leads to a concentration on the morphological marking of tense and aspect. This bias characterizes

most of the studies of the acquisition of temporality both in L1 and L2. As Klein argued, tense and aspect markings are highly language specific devices and verbal morphology is but one of the many means of expressing time in language. Even when both the target language and source language have verbal inflections, there is an early stage during the learning process when learners produce uninflected verbal forms systematically and fall back on other means such as framing time using adverbials, relying on discourse organization principles and assumed shared knowledge of conversational partners. The same phenomenon is also observed with late but fossilized learner languages. With verbal inflections unavailable, what means will learners of Chinese, a target language with no verbal morphology, use to express time? To what extent will they rely on these means? And how does their learning of temporality in Chinese progress? These are the major questions the dissertation is meant to address.

Although there are only a small number of studies on the acquisition of time in Chinese as a second language, evidence accumulated from the source of teachers and professionals in the field of Chinese language study suggests the directions that studies on the acquisition of time in Chinese could follow. For example, English speakers learning Chinese as a second language frequently show the following pattern in the use of temporal expressions. When it comes to grammatical means of encoding temporality, they are observed to feel compelled to mark tense mistakenly using the Chinese aspect marker, and by doing so take the Chinese perfective particle *le* for a marker of the simple past tense (Teng 1999, Sun 1993, Wen 1995). When it comes to encoding temporality by lexical means, they seem to be unaware that Chinese relies on verb complement

constructions as English does on phrasal verbs to express different situation types, and their use of verbal complements is far less frequent and accurate than the native speakers'. Finally, when it comes to using discourse/pragmatic devices to indicate temporality, both native Chinese speakers and native English speakers rely on discourse organization principles to a certain extent. However, while native speakers of Chinese give a lot of contextualization cues (Gumperz 1982, Bamberg 1987) to signal temporal relations in discourse, it seems English L1 learners of Chinese L2 have not learned to use these cues and their narrative production suffers from incoherence as a result.

In this dissertation, the narrative discourse in Chinese produced by adult English-speaking learners will be analyzed from a discourse-pragmatic perspective that goes beyond grammatical encoding. It is my hope that the findings of the study will contribute to a better understanding of temporality in discourse and to better methods for teaching temporality in Chinese as a second language.

THE PROPOSED DISSERTATION STUDY

Research Questions

- (1) How is temporality represented in Chinese L1 narrative productions?
- (2) How is temporality represented in the interlanguage narratives of the English learners of Chinese as a Second Language (CSL)?
- (3) Are there patterns of acquisition of temporality in discourse by Chinese L2 learners?
- (4) What might be the possible roles of L1 and semantic universals in the interlanguage representations of temporality in narrative production?

Data and Subjects

The data set used for this dissertation study consists of two parts. The first part consists of the Pear Story narratives produced by 20 native speakers of Chinese, which were collected by Mary Erbaugh in Taiwan. The second part consists of the Pear Story narratives produced by twenty-one English-speaking adult second language learners of Chinese. They were collected by Charlene Polio. For detailed information on the background of subjects and the collection procedure, please refer to Erbaugh (1990) and Polio (1995). Both Professors Erbaugh and Polio have given written permission for me to use their data for this dissertation.

The twenty-one English-speaking adults were enrolled in Mandarin Chinese at the Institute of Chinese as a Second Language of the Taiwan Normal University at the time their narratives were collected. They studied Chinese for at least two hours a day. They were grouped into three different proficiency levels – the low (N= 7), the intermediate (N=8) and the high (N= 6) - after information from the following sources was taken into consideration: placement information, interview, imitation test, and native speaker rating (Polio 1995, 361-362).

Both the native speakers and the learners were shown the video of a six-minute long film, *The Pear Story* (Chafe 1980), and were then asked to tell the story in the film to the interviewer, who was understood to have not seen the film. Each subject's telling was audio-recorded. The native speakers' narratives were transcribed in characters and the learners' in the Romanized Chinese script - Pinyin. For uniformity of analysis and presentation in this study, the native speakers' data were also transcribed into Pinyin.

Altogether the twenty Chinese L1 narratives and twenty-one Chinese L2 narratives constitute the database of this dissertation. A sample of the data is included as Appendices.

Approach

The tenseless nature of the Chinese language (no grammatical tense) and the relatively late emergence of tense morphology in the acquisition of natural languages converge to argue for an approach not restricted to temporality by grammatical means but broad enough to include non-grammatical means. The form-only approach is inadequate to reveal the learner's competence. Instead, this dissertation takes the functional/discourse approach. Following this model, the general questions explored will concern the form-function relationships exhibited in the interlanguage temporal system, the types of principles constraining the mapping of grammatical forms onto functions in second language grammatical development, and first language grammaticalizations that influence the development of the second language (Braid 1999, 149).

A form-only approach analyzes the suppliance of a given form in an obligatory context. By doing so, it ignores the functional variations of a form. It also neglects other forms that are in competition with the form in question. Long and Sato (1984) presented two different functional approaches. One approach is the form-to-function analysis which includes a comprehensive analysis of the functional distribution of a particular form in a learner's IL. The other is the function-to-form approach which begins with a functional domain, the expression of temporality in the present case, and examines the grammatical forms encoding the function. They suggest a combination of the two approaches

beginning with a function-to-form analysis complemented by a form-to-function analysis. This dissertation will use the combination of approaches proposed by Long and Sato (1984). The first step will be to investigate how temporality is expressed in the narrative of native speakers and then to compare this with how it is expressed in the interlanguage of English learners of Chinese. Next a particular linguistic form, the perfective marker *le*, is chosen to examine what functions are attributed to this form by the native speakers and by the learners.

The framework for the first stage of study (function-to-form analysis) is also known as the Conceptual Approach, as first proposed in Stutterheim and Klein (1987). It starts with the concepts that the learner wishes to express and investigates how these are manifested in the learner language. Rather than simply identifying the structures used by the learner and comparing them to the structures of the target language, this approach investigates the ways in which learners make use of resources (mainly linguistic resources plus non-linguistic) to express certain systematic concepts, such as past time reference or plurality, or definiteness. The linguistic resources at the learner's disposal may include inflection, lexicon, and discourse structure; and the non-linguistic ones might be shared world knowledge and the context. It is therefore necessary to consider all levels of linguistic analysis and not just morphosyntax.

In this dissertation, I assume that for the learners of Chinese, concepts of time flow and temporal relations are held in common (Goddard and Wierzbicka 1994) across Chinese and English. They have the concepts of time and are aware of the need to

indicate temporality in their utterances. The task for the learner then is to acquire the means of expressing those concepts and of encoding those temporal relations.

ORGANIZATION OF THE DISSERTATION

The dissertation contains six chapters. The first chapter introduces the topic and identifies the problem. It also raises the research questions, defines the scope of study, and presents the general approach adopted. Chapter II lays down the theoretical framework for the analysis of temporality in natural language, which proposes an interactive model of three dimensions for the concept of temporality, namely situational aspect, viewpoint aspect and temporal location. Chapter III puts such an analysis of temporality in the context of narrative discourse and explores how temporality is involved in discourse grounding. It describes how temporality (temporal movement and temporal overlap/simultaneity) is expressed in narrative discourse by native speakers of Chinese. Chapter IV aims to build up an inventory of devices (including both grammatical devices and non-grammatical devices), one for native speakers and one for learners at different stages of development. Comparison will be made between the two to determine learners' acquisition of temporality in discourse. Chapter V presents a form-to-function analysis which complements the function-to-form analysis presented in the previous chapter. The form in focus is particle *le*. It will first present a detailed study of the variable use of particle *le* in narrative discourse by native speakers highlighting the influence of phonological, syntactic, and discourse factors. Then it will be followed by a study of the variable use of *le* by L2 learners to determine if the same factors affecting its use by native speakers constrain its use by L2 learners and if yes, whether they have the

same constraining effects. Chapter VI presents a synthesis of the previous analyses, reaching the conclusion that temporality is a complex concept consisting of multiple dimensions. Its expression takes different forms, sometimes linguistic and sometimes not linguistic. And oftentimes its expression in discourse is closely related to the discourse structure such as grounding. A form-only analysis such as analysis of particle *le* is only meaningful in such a context. The dissertation ends with a brief discussion of the implications of the findings of this study for acquisition research of Chinese as a second language and for Chinese pedagogical grammar.

Chapter II THE THREE DIMENSIONS OF TEMPORALITY

Chen (1988) proposed a theory that conceptualizes temporality as being comprised of three dimensions. The three dimensions correspond to what Smith (1991) termed the two component theory of aspect plus tense. Since Chen's terminology is in Chinese, Smith's terminology is adopted in this dissertation. The three dimensions are situation aspect, viewpoint aspect and temporal location. Smith (1991, 2000) emphasized that these three dimensions interact, a point that will be explicated in detail later on. This chapter presents the three dimension theory of temporality, with particular reference to the context of narrative discourse. It will also discuss how interaction among the three dimensions contributes to explaining the seemingly multiple meanings of particle *le* and identifying the temporal locations of situations in Chinese.

Section One SITUATIONAL ASPECT

The traditional concept of aspect refers to perfective vs. imperfective as manifested in verbal inflections. As Rohsenow (1976) and Zhang (1995) both observed, study of aspect in Chinese has focused on the equivalents of these verb inflections, namely the aspectual particles. In contrast, the study of situation types has received less attention. The purpose of this section is to present classification of situations in the framework of Vendler (1967), to review studies of verbs and situation types in Chinese and to come up with a classification of situation types appropriate for the representation of temporality in narrative discourse.

Classification of Verbs

The linguistic category that received the most attention from linguists studying temporality is the verb. The study of tense started from study of verbal inflections that bear temporal reference. But it is the observation since Aristotle that as the linguistic category that represents events and state of affairs in the world, verbs' inherent meanings carry important temporal information expressing processes, states, actions, and achievements. This is also the category of what Comrie (1976) termed inherent aspectual meaning.

Vendler (1967) discovered time "schemata" by examining typical examples of verbs. His classification of common time schemata implied by the use of English verbs remains one of the most influential and has informed many subsequent classifications. Vendler (1967) identified and described four time schemata of verbs, and grouped verbs into the following four types. It is worth mentioning that Vendler's classification (1967, 106) is based on verbs except for accomplishments, where he included the direct object of the verb.

State: lacking continuous aspect, predicated for a shorter or longer period of time. For example, A loved somebody from t_1 to t_2 means that at any instant between t_1 and t_2 A loved that person.

Activity: continuous aspect with no set terminal point. For example, A was running at time t means that time instant t is on a time stretch throughout which A was running.

Accomplishment: continuous aspect with set terminal point. For example, A was drawing a circle at t means that t is on the time stretch in which A drew that circle.

Achievement: lacking continuous aspect, predicated only for single instants of time. A won a race between t1 and t2 means that the time instant t which A won that race is between t1 and t2.

The distinctions between punctual and durative, telic and atelic, and stativity and dynamism are universal in that human perception is sensitive to such distinctions. The number of such distinctions is limited, so that almost all the languages make such distinctions, although the distinctions may take grammatical forms or may not, and the same distinction may have different grammatical implications in different languages. These distinctions are based on a universal conceptual/logical basis. It is important to point out that it is the conceptual opposition rather than the situation types which embody such opposition that is universal. Verkuyl (1972), Comrie (1976), Dowty (1979, 1986), Bache (1995), Smith (1983, 1991) all used the same set of semantic oppositions.

Teng (1974), working independently of Vendler's framework, implicitly drew on similar semantic distinctions to classify verbs in Chinese. What he meant by the "high-level semantic characteristics of verbs" in fact corresponds to the above-mentioned oppositions. Therefore, he classified verbs in Chinese into three groups: actions which

define various activities (e.g. *chi* “eat”, *kaolu* “consider”), states which define qualities or conditions (e.g. *xihuan* “like”, *gui* “expensive”), and processes which define a change from one state to another (e.g. *si* “die”, *chen* “sink”, *xing* “awake”). The classification is based on the verb alone and the major consideration is the syntactic implications such as compatibility with the BA construction, the selection of negation particles, interactions with aspectual particles, etc. Obviously, many verbs can participate in more than one situation type with different syntactic structures. Unless systematic description of those verbs and their closely related arguments is given, such description is not very helpful for explaining temporality in discourse. In addition, the term “process” is misleading in that it corresponds to achievement in Vendler’s scheme or complex change in Chen’s (1988).

Tai (1984) attempted to identify the characteristics underlying the Chinese verb system with reference to Vendler’s four categories. He came up with three categories of verbs in Chinese: state (e.g. *ai* “love”), activity (e.g. *xue* “study”), and result (e.g. *sha si* “kill”, *xuehui* “learn”). He argued that the time schemata for state and activity are no different from those in English, but that for results is different. Results in Chinese do not have continuous tenses, imperfective viewpoint in Smith’s term, and have a definite instant corresponding to the end point of an event from the point of view of result rather than the action. The unit of his analysis includes verbs and their complements. Accomplishments and achievements in Chinese are usually realized by compound verbal constructions (e.g. *da po* “break”) and achievements by simple verbs as well (e.g. *chen* “sink”). In the compound verbal construction, the verb itself indicates a presupposed

activity and the complement an asserted result. These constructions do not allow for progressive aspect, and the states they imply are not states per excellence either.

Therefore, Tai call them results.

Ma (1981) is interested in the meaning of the verb when it is followed by a quantified temporal adverbial that indicates duration such as *san tian* “three days”. Therefore, the linguistic unit he examined includes verbs and duration adverbials. He didn’t name the types of verbs he identified, but he explicitly followed the three semantic features, namely durative/punctual, telic/atelic, and stativity/dynamism. The first type described as [-durative] and [+telic] corresponds to Vendler’s achievements, such as *si* “die”, *zhidao* “came to know”, and *kanjian* “see”. The second type [+durative] and [-telic] corresponds to activities, such as *deng* “to wait” and *zuo* “to sit”. For the third and fourth type, he included direct object NP in his analysis. The third type has the features [+durative], [+telic] and [-stativity], such as *kan shu* “read book(s)” in *zheben shu wo kan le yinian le* “I have been reading this book for a year/It’s been a year since I read the book”, and the fourth type [+durative], [+telic] and [+stativity], such as *kan dianying* “see a movie” in *zhege dianying wo yijing kan le yinian le* “It has been a year since I saw the film”. The analysis is flawed in the following aspects. First, there is no intrinsic motivation to classify verbs on the single criterion of the quantified temporal adverbials. Second, granted it is a legitimate criterion, for reasons not specified, he left states out of his analysis. This is a serious shortcoming, because stage-level statives are also compatible with duration adverbials. Third, the fact that there is ambiguity in the sentence *zheben shu wo kan le yinian le* (“I have been reading this book for a year/It’s been a year since I read

the book”) but there is no such ambiguity in the sentence *zhege dianying wo yijing kan le yinian le* (“It has been a year since I saw the film”) is not attributable to the verb *kan* “see/watch” plus its direct object *dianying* “movie” or *shu* “book” but rather to the pragmatic knowledge of how long watching a drama or reading a book usually takes. Finally, for his classification of the last two types of verbs he actually included direct objects (with definite reference) into his analysis. However, he failed to note that verbs alone do not determine the temporal structure; rather, they do it together with direct objects. Obviously, quantified temporal adverbials is only one type of adverbials that interact with verbs. Classifying verbs on this single criterion yielded only partial results.

Classification of Situation Types

Although Vendler’s theory has informed many following classifications, what did not survive of his classification is his focus on the verbs. It is now widely accepted that “a situation is a property of the whole clause which may be determined by the type of NP serving as subject or object, the presence or absence of directional phrases, or the choice of adpositions, e.g. to vs. towards”. (Lehman 1999, 37)

Breaking away from the focus-on-verb approach, later studies classify situations on the clause level. It is not the purpose of this dissertation to deal with the theoretical pitfall of the distinction between clause and sentence. In view that external argument (subject) is rarely determinative of the situation type (Tenny 1994), it suffices to say that the linguistic unit in the analysis of situation is clause.

Teng (1986) pointed out that although verbs are essential in classifying situation types, what should be classified are not verbs but rather the whole predicates. Applying

Vendler's taxonomy, he classified situations in Chinese accordingly into four types. However, his classification is too inclusive in that he didn't separate situation type and viewpoint aspect, two related and yet independent components in Smith's terms. Therefore, a stative situation such as *gan* "dry", followed by a perfective marker *-le*, becomes achievement in Teng's scheme.

Chen (1988) followed Teng's approach that analysis of situations should have the sentence as the unit but differed from him in insisting that situation be treated independent of tense and viewpoint aspect. Recognizing that all constituents of a clause may contribute to the classification of situation types, he maintained that verbs and their direct objects have more to contribute to the aspectual information than complements and subjects. Since verbs alone cannot determine the situation type, it is possible that the same verb appears in sentences of different situation types. According to the same set of three semantic features [static], [durative], and [telic], Chen came up with the following classification of situation types in Chinese: state, activity, accomplishment, complex change and simple change. Since Chen's is the first systematic description of temporality in Chinese, his classification of situation types deserves further explanation.

The first three types, as the terms suggest, correspond to those of the Vendler's categories. It is the fourth and the fifth type that deserve closer examination. Chen categorized complex change as [-stative], [+telic], and [-durative]. His examples (37), (38) and (40), which are reprinted below, fall into three subgroups.

(1) *nongkeyuan* *zheng* *zai* *gailiang* *dao* *zhong*.

Academy of agriculture right (now) ZAI improve seed rice

The academy of agriculture is right now improving seed rice.

(2) *zhexie ren zheng zai chengwei women suo de yewu guban*

these man right (now) ZAI become our institute DE profession backbone

These people are now becoming the backbones of our institute.

(3) *wo xiang cong houmen zou jinqu.*

I want from backdoor walk into

I want to enter/get in through the back door.

If the situation in (1) is [-durative], as simple change (achievement in Vendler's term) is, it should be incompatible with progressive aspect. The only possibility that a [-durative] situation might occur in progressive is that the progressive view of the situation *gailiang* "to improve" focuses on the preliminary stage that leads to the culmination point of the situation (from not improved to improved) rather than the ongoing process of being improved. So it follows that something being improved should be in the preliminary stage of improvement and has not been improved yet, just as something dying has not died yet. But this goes against the logical implication of a situation like *gailiang*. If it is true that something is being improved, then it is true that it has been improved. In this regard, *gailiang* behaves very like an activity. For example, if it is true that someone is walking then it is true that he has walked. The conclusion that *gailiang* is [-durative] is untenable.

In contrast, the situation in (2) is indeed [-durative] so that the progressive view of *chengwei* “become” focuses on the preliminary stage of “become”.

In the case of (3), if the situation *cong houmen zou jinqu* “enter through the back door” has the feature of [-durative], it is hard to explain its compatibility with the progressive aspect in the following example (3*). (By the way, this example also shows that Tai’s conclusion that resultative compound does not allow progressive reading, which is based on verbs, is incorrect. To say the least, it does not apply to directional compounds.)

(3*) *Wo cong houmen zou jinqu de shihou, kanjian shufang li you yige ren.*

I from back walk into DE time see study in exist one person

I saw a man in the study while I was entering through the back door.

It turns out that two of the three subtypes of Complex Change situations are [+durative] and the combination of [-stative], [+durative], and [+telic] should put them in the type of accomplishments.

Chen’s categorization of the fifth type as [-telic] is arguable too. He seems to contradict himself when he observed that a situation of this type has a starting point and an end point that occupy the same position on the axis of time but denies that it has a final point simply because there is no time course during which it moves from the starting point to the final point. As Smith (1991) pointed out, the distinction made in the classification of situation types is based on ideal situations. It is a subjective matter

whether there is a point where a person starts to die and whether it actually takes some time for him to move to another point where he/she literally died. However, it is generally agreed on by most that achievements are telic situations. In the case of achievement situations, it is clear that there is a culmination point where a change takes place, so they must have an inherent endpoint and thus they must be telic.

In addition, there is also inconsistency in the way situations such as *chengwei* “to become” and *si* “to die” *duan* “to break” are categorized by Chen. Although *duan* “to break, get broken” behaves just as *chengwei* does, it is characterized as [-telic] and [-durative] but *chengwei* “to become” remains [+telic] and [-durative]. Obviously, they can all be categorized as achievements in Vendler’s scheme.

With the first and third subgroups of complex change category reclassified into accomplishments and the second subgroup and the simple change category reclassified as achievements, Chen’s scheme is shown to be compatible with Vendler’s classification.

Following Vendler’s categorization of temporal schemata exhibited by verbs but explicitly using clause as the unit of classification, Smith (1991) concluded that the four basic situation types as proposed by Vendler (1967) are identifiable in Chinese. And He’s (1992) study of situation types and their grammaticization in Chinese came to the same conclusion that the basic types of situations in Chinese are very similar to those in English. They are state, activity, accomplishment, and change-of-state (achievements in Vendler’s scheme).

Smith (1991) used the term “idealized” situation types for those which are realized by verb constellations and distinguished by cluster of temporal properties, themselves

forming three contrasting pairs. She posited a cross-linguistic five-member classification. To Vendler's four types she added a fifth category semelfactive (e.g. pat, cough). The characterization of situation types in terms of the above semantic features can be summarized in the following chart. The chart is taken from Smith (1991, 30). I have added the examples.

Situations	Features			Chinese examples	English examples
	stative	durative	telic		
States	[+]	[+]	[-]	<i>zhidao</i>	to know
Activity	[-]	[+]	[-]	<i>paobu</i>	to jog
Accomplishment	[-]	[+]	[+]	<i>xie yifeng xin</i>	to write a letter
Semelfactive	[-]	[-]	[-]	<i>kesuo</i>	to cough
Achievement	[-]	[-]	[+]	<i>ying</i>	to win

The contrast between [+stative] and [-stative] distinguishes states, which consist of undifferentiated moments without endpoints, from events, which are dynamic in nature and consist of stages. Such a distinction between states and events is reflected in many languages and has specific implications for language. For example, since the issue of boundary or telicity is irrelevant for states, perfective viewpoint, which presents a situation as bounded, is generally not available to states. It may also have language-specific implications. For example, in English, stative verbal expressions generally do not take progressive aspect, because progressive assumes dynamicity, the lack of which is the defining feature of states.

Among the class of events which is categorized as dynamic or [-stative], a further distinction could be made between those that involve a natural endpoint and those that do not. For example, the event represented by to “write a letter” naturally comes to an end when the letter is actually finished. But an event such as “jogging” does not presume any endpoint and theoretically can go on forever but for the knowledge that events require source of energy and a human being can not jog forever. Activities and semelfactives are [-telic] while accomplishments and achievements are [+telic].

A third contrast that crosscuts the previous two is that between [+duration] and [-duration]. Some situations such as all states and such events as activities and accomplishments are durative, while some others are instantaneous such as semelfactives and achievements. Such a contrast has manifestations in grammar. For example, in English the progressive forms of achievements focus the preliminary stage that leads to the achievement while the progressive forms of semelfactives express the iterative meaning. In Chinese, the progressive form of semelfactives also expresses iterativity, but the progressive form of achievement is not allowed.

The postulation of a fifth situation type does not change the whole scheme substantially. Semelfactive is like achievement in that it is dynamic and instantaneous, but unlike achievement it does not have an inherent endpoint. As Smith observed, in the presence of temporal adverbials that indicate duration or when presented in the imperfective viewpoint, semelfactives shift to activities. This is also true in Chinese. However, in Chinese semelfactive exhibits another kind of shift. It frequently occurs in the so-called delimitative aspect (Li and Thompson 1981), e.g. *pai yi xia* “pat one time”,

shi shi “have a try”. Its durative feature is between that of an activity and an achievement. Intuitively it means doing an action “a little bit”, or for a short period of time. However, as Li and Thompson (1981) suggested, it can be regarded as activity with quantifications and thus having the features of [+durative] and [+telicity]. Therefore, semelfactives in the delimitative aspect in Chinese can be treated as belonging to the type of accomplishments. With semelfactives shifting either into activities or accomplishments, in this dissertation, Vendler’s scheme can be retained, as long as the classification is on the sentence level.

Another issue remains to be solved: the phenomenon of aspect shift when a situation of a particular type changes (is coerced, in semantic terms) into a different type because of the presence of some temporal adverbials or because of some particular syntactic patterns that they appear in. In Smith’s framework, it is solved by the distinction of basic level and derived situations. A basic-level situation type is realized most importantly by verbs and their key arguments. Verb phrases (verbs plus complements such as resultative and directional complements) and NPs that are syntactic arguments constitute what Smith terms verb constellations which substantiate basic-level situation types. However, the addition of temporal adverbials and some other factors such as contextual information may result in a shifted or derived type of situation.

Incompatibility of adverbials and situation types when they have different values lead to clashes (Smith 1991, 158). Such clashes are normally resolved by a shift in the value of the verb constellation which receives a marked interpretation. The adverbial overrides, requiring an interpretation of the situation type as compatible with it.

“Typically, a contextual reinterpretation process is triggered whenever there is a conflict between the aspectual character of the eventuality description and the aspectual constraints of some other expression in the context” (De Swart and Molendijk 1999, 21-22). The triggers could be durative time adverbials such as “for” and “in”, and adverbs like “suddenly”. Events to states and states to events as explained in Smith (1991) are all examples of such kind of shift.

Linguistic Realization of Situation Types in Chinese

Smith (1991) explicitly treated situation types as a covert linguistic category. All natural languages make distinctions among the above-mentioned limited types of situations. Recognizing the universality of human beings having the common perceptual and cognitive abilities, the question is not “whether speakers of Mandarin are aware of the distinction between types of events but whether there is a linguistic basis for the distinction in Mandarin” (Smith 1991, 309). What follows is a discussion of the linguistic realizations of situation types in Chinese.

States

States are usually realized in Chinese by the following types of verbal expressions.

- Verbs that indicate properties or relations: *shuyu* “belong to”, *dengyu* “equal to”, *baohan* “contain”, *xing* “with ... as surname”
- Verbs that describe psychological states: *xihuan* “like”, *gaoxing* “happy”, *zhidao* “know”, *xiangxin* “believe”, *haipa* “afraid”, *hen* “hate”
- Verbs that indicate locations or positions, always followed by prepositional phrases of location: *gua* “hang”, *zhan* “sit”, *cang* “hide”

- Adjectives and prepositional phrases are also usually states.

According to Smith (1991, 377), states have the following syntactic properties (some of the properties suggested by Smith are arguable, so what are presented are only some of the syntactic properties).

Adjectives and verbs that describe psychological states allow modification by the adverb *hen*. States accept the neutral viewpoint, the *guo* perfective, and the *zhe* imperfective with stage-level predicates. Discussion of types of viewpoint aspect is to be found in the immediately following section.

(4) *Wang Peng jintian hen gaoxing.*

Wang Peng today very happy

Wang Peng is very happy today.

(5) *lao ren ye dou nianqing guo.*

Old people also all young GUO

Every old man was once young.

(6) *women zheng xingfen de shihou ...*

we right in the middle of excite DE time

When we were being excited ...

Activities

Activities are typically realized by

- Verbs with features [-telic] and [+durative] form activities with their complements (unquantified or generic nouns).

- Verb constellations that denote physical activities: *zoulu* “walk”, *paobu* “run”, *laodao* “nag”, *ting yinyue* “listen to music”, *kanshu* “read”, *youyong* “swim”, *jiaoshu* “to teach”, *chouyan* “smoke” and mental activities: *xiang* “think”, *kaolu* “consider”, *guanxin* “care about”

Sentences expressing activities can be presented in the progressive viewpoint and allow verb copying.

(7) *Li Qun zai ting yinyue.*

Li Qun ZAI listen music

Li Qun is listening to music.

(8) *ni zuihao kaolu kaolu.*

You had better consider consider

You'd better think about it.

Accomplishments

Accomplishments include the following structures.

- Verbs with features [+telic] and [+durative] form accomplishments with their complements.
- Verbs plus quantified/specified direct objects such as *xie yiben shu* “write a book”, *zao yijia feiji* “make an aircraft”
- Verbs plus prepositions that indicate source/goal “directional complements”: *wang shushang pa* “climb toward the tree top”

- Verbs plus quantification: *zou yi yingli lu* “walk a mile”

Sentences expressing accomplishments can be presented in the progressive viewpoint and are ambiguous with adverb *chayidian* “almost”.

(9) *tamem zheng zai zao yi jia feiji.*

They right in the middle of ZAI build one CL aircraft

They are in the process of making an aircraft.

(10) *ta cha yidian pao le san yingli.*

He almost run LE three mile

He ran for almost three miles./ He almost started a run of three miles.

Semelfactives

Semelfactives are realized by simple verbs such as *qiao* “knock”, *pai* “tap”, *kesuo* “cough”.

The following are their syntactic properties:

Dynamic syntax: semelfactives shift to activities when presented in the progressive viewpoint.

(11) *you ren zai qiao men.*

Exist person ZAI knock door

Someone is knocking at the door.

They allow for delimitative aspect.

(12) *qingqing pai yi pai haizi jiu hui shuizhao.*

Gently pat one pat child then will fall asleep

Pat gently and the child will fall asleep.

Achievements

Achievements include the following structures.

- Verbs with features [+telic] and [-durative] such as *si* “die”, *ying* “win”, *ting* “stop”, *wangji* “forget”
- Verbs with the feature [-telic] plus complements: *da po* “break”, *kanjian* “see”, *xuehui* “learn”, *zuo hao* “done”

Achievements clash with progressive viewpoint because they have the feature of [-durative], a point unfortunately lost in the English translation.

(13) * *wo zheng zai xuehui tan gangqin.*

I right in the middle of ZAI learn play piano

I am now learning how to play piano.

Finally, some verbal structures in Chinese deserve special attention when it comes to the situation types they can represent. First, verbs such as *kaishi* “to start, begin”, and *tingzhi* “to stop” in serial verb constructions shift the focus to the beginning or ending point of a situation, resulting in accomplishments or achievements depending on the feature of durativity of the situation. In the case of *jixu* “to continue”, the resulting

situation is that of an activity. *shitu* “to try, attempt” has the feature of [-telic] and a situation described by *shitu* is an activity. The situation type described by *bang* “to help” depends on the situation type described by the verb constellation following *bang*.

Second, the type of situation described by a negative sentence is a state bearing the features of [+stative] and [+durative]. Since a negative sentence represents a situation that did not happen or is not the case of certain state of affairs, it has the feature of [+stative]. There seems to be language-specific exception, however. For example, the sentence “he didn’t get up until 11 am in the morning” in English takes the form of a negative sentence but actually encodes an event. Although the pattern is used to encode an event, the existence of such a pattern does not necessarily contradict the observation that negative sentences describe states. We can maintain that the sentence “he didn’t get up until 11 am in the morning” describes a state “he didn’t get up”. However, a state has the temporal features of [+stative], [+durative], and [-telic]. It has homogenous temporal structure and has no inherent endpoints. Therefore, a state is expected to hold unless some external force brings it to an end. The adverbial phrase “until 11 am in the morning” explicitly indicates that the state “he didn’t get up” did not hold forever but rather was interrupted at “11 am in the morning”. And since a state came to an end, we infer that there must have been an event that was the cause. That is why the above sentence encodes an event.

The type of situation described by a sentence with a modal verb on the main verb is also a state. Modal verbs such as *yao* “will”, *hui* “will/can”, *neng* “can”, *yinggai* “should” encode such concepts as desirability, ability, possibility and obligation instead of actual

events or happenings. Like negative sentences, sentences with modal verbs describe irrealis situations and thus have the feature of [+stative].

Similarly, the V + *de/bu* Resultative Complement, commonly known as the potential complement structure, expresses ability or potential. Like sentences with modal verbs, it indicates a state.

Summary

Vendler's classification can be retained under the condition that it is based on clause rather than isolated verbs. Since situation types are defined in terms of more basic semantic contrasts like stativity, telicity and duration, this dimension of temporality can be discussed in either set of terms without causing any confusion. In this dissertation, for the purpose of discussion and reference, terms of both basic semantic distinctions and those of situation types will be used.

Section Two VIEWPOINT ASPECT

This section is on the viewpoint aspect, the second dimension in Chen's (1988) three component theory of temporality. In Smith's (1991) two-component theory of aspect it is also called Viewpoint aspect. Classical definition categorizes viewpoint aspect as "different ways of viewing the internal temporal constituency of a situation" (Comrie 1976, 3). This section describes the types of viewpoint aspect available in Chinese, the linguistic coding of those viewpoints and discusses the interaction of viewpoint aspect with situation types.

Fully grammaticalized inflectional markers of tense and aspect do not exist in Chinese, a typical analytical language. Viewpoint aspect markers in Chinese, many of

which are treated as particles or functional “help” words in the traditional grammar, still retain the meanings of their lexical sources. A large amount of literature on verbal particles with aspectual meanings can be found, and virtually every reference grammar has special sections devoted to the topic. In this section, special attention is given to the perfective aspect particle *le*, which is the most controversial.

Types of Viewpoint Aspect

The previous section discussed how languages categorize events and states of affairs in terms of such universal perceptual distinctions as dynamicity, duration and telicity. The present section is about the viewpoint aspect, which does not have so much to do with those semantic features but rather with how such a particular situation is presented by a language user. Viewpoint aspect presents a situation in a certain way, making visible its whole or only parts of it without reference to its endpoints. The viewpoint aspect forms a closed grammatical subsystem. Smith (1991) posited three viewpoint aspects for natural languages: the perfective, the imperfective, and the default neutral aspect.

When the totality of a situation is referred to without reference to its internal temporal constituency and

the whole of the situation is presented as a single unanalysable whole, with beginning, middle, and end rolled into one; no attempt is made to divide this situation into the various individual phases that make up the action of entry. Verb forms with this meaning will be said to have perfective meaning, and where the language in question has special verbal

forms to indicate this, we shall say it has perfective aspect. (Smith 1991, 3)

The form that does not present a situation in its whole “but rather makes explicit reference to the internal temporal constituency of the situation” (Smith 1991, 4) is said to have imperfective meaning. When a situation is presented in the imperfective, reference is made to an internal portion of it, while there is no explicit reference to the beginning or to the end.

Since situation has to be visible or presented in some way, a neutral viewpoint is proposed for those situations whose linguistic expressions do not contain any viewpoint markings. Situations in the neutral viewpoint have ambiguous aspectual properties, but discourse context can disambiguate interpretation.

Just like any other grammatical category, viewpoint aspect may be expressed by means of the inflectional morphology of the language in question; it may also be expressed by means of a periphrasis, such as the English progressive. In Chinese, it is most often expressed by particles and sometimes by periphrastic expressions.

Viewpoint aspect and situation aspect are independent of each other and yet they interact with each other in interesting ways. Situational aspect is about the temporal information that is characteristic of a situation. However, viewpoint aspect is about how a language user chooses to accentuate certain characteristics by presenting the situation in a certain way.

The information conveyed by viewpoint is directly related to the temporal schema of the situation it focuses. Viewpoints span all or part of a

situation, more precisely, of the temporal schema of a situation. Therefore, what information a viewpoint presents is affected, and limited by the structure of the situation talked about. (Smith 1991, 92)

Perfective Aspect in Chinese

Perfective aspect presents a situation as a whole, as closed, as punctual (Smith 1991, 104). That some situations can be presented as a whole is because the situation itself is bounded, i.e. has a beginning and an end point so that it can be presented as a whole. When the situation itself does not have inherent boundaries, temporal delimitation should be indicated by some other elements in the sentence such as temporal adverbials or pragmatic knowledge. Viewpoint aspect interacts with different types of situations in different ways. There is a natural congruence between the temporal values of certain type of viewpoint aspect and those of certain types of situations. For example, perfective viewpoint presents a situation as a whole with both of its ends visible and telic situations happen to be bounded at both ends. (Similarly, while imperfective viewpoint presents a situation without reference to its end points, it happens that states do not have end points and atelic situations do not have inherent terminal end point.) And there is an inherent incompatibility between perfective aspect and situations that do not have inherent boundaries. Perfective viewpoint varies across languages in terms of possibilities of occurrence with situation types. Smith (1991) proposes that it is available for all situation types in some languages, but restricted to only some situation types in others. Perfective

viewpoint in Chinese is realized by particles *le* and *guo*, which are both optional syntactically. They are treated separately.

Perfective *le*

To discuss the perfective particle *le*, frequent reference will be made to the reference grammar by Li and Thompson (1981). As a comprehensive reference grammar of Modern Chinese with 25 topics covering word level categories and sentence-linking discourse categories, one seventh of the volume is devoted to the discussion of the particle *le*. It is the most detailed and most widely cited reference grammar in Chinese.

For any meaningful discussion of perfective *le*, the decades-old controversy of one single particle *le* or two distinctive particle *les* cannot be avoided. There are two opinions regarding the particle *le* in Chinese. One position holds that there are two particles, homophonous but having different syntactic distributions and different meanings. 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 sentence and is usually associated with meanings such as change of state. The opposing position holds that semantically the two homophones are closely related, and they are historically related. They can be treated as the same morpheme on semantic terms. This is known as the Unified *Le* position. In this dissertation it is argued that there is a single particle *le* regardless of its syntactic position and its basic function is to encode the perfective viewpoint. Other functions attributed to the particle such as Currently Relevant State (CRS), inchoativity, perfect (anteriority, depending on the terminology) are derived from interactions among the three dimension of temporality and principles of

language use. Instead of arguing that the two particles are distinguished structurally, it will be argued in this dissertation that they are distinguished functionally. The approach in this dissertation would be to treat their structural features and their functions separately.

The rationale for such an approach is that the best theory of language is one with maximal explanatory power and maximally simple and elegant theory construction. In other words, the less complex the theory construction the better, because greater explanatory power sometimes might be achieved with an overly detailed and unwieldy theory construction. Other things being equal, a more parsimonious theory is always preferred. The means by which a separate lexical entry (itemization) is stipulated to explain a different and perhaps related meaning of a linguistic form might increase the explanatory power of the theory. However, that is achieved at the cost of a simpler and more elegant theory of grammar, because a new entry to our vocabulary only adds to the idiosyncrasy of the language, which works against our goal of constructing a grammar which is characterized by rules and principles.

To explain the seemingly multifunctions of *le* by reducing it to a single basic function plus the workings of grammatical rules and principles, we need a theory of temporality in natural languages that recognizes that the temporal system of a language is a complex system with its interacting subsystems. In addition, to explain the meanings of *le* in terms of the applications of pragmatic principles, we need a theory of language use that not only attunes to what an utterance means but also to what that utterance implies, entails and presupposes. For such a theory of temporality in natural language, I turn to Smith

(1991). And for such a theory of language use, I rely on pragmatics theory in the tradition of Grice, in particular on his idea of implicature.

1. *The Three Dimensional System of Temporality*

As far as I know, Chen (1988) is the only one who has used the term three-dimensional theory of temporality. However, such an idea has been circulating for a long time and is evident in many prominent discussions of temporality in language. For example, in his comprehensive treatment of the topic of time and verb, Binnick (1991) not only provided a discussion of that component of temporality which started in its Slavic tradition - aspect, but also traced the study of a second component, situational aspect, alternatively known as Aktionsart (but he used the term Aristotelian aspect), to its ancient root in Greece. And finally, he also discussed its third component - temporal location, whose grammatical category is known to scholars of major European languages as tense. Although he did not use the term three dimensions, the idea that there are three components to temporality is obvious. Although many scholars have touched on the idea, it is Smith (1991, 2000) who devoted much of her attention to the role of the interactions among the components in the interpretation of temporality in natural languages.

Smith (1991) proposed a two component theory of aspect in which situational aspect and viewpoint aspect are considered to be two independent and yet interacting components of the category of aspect. Situational aspect classifies situations such as events and states into idealized types on the universal semantic distinctions such as stative vs. dynamic, telic vs. atelic, and durative vs. punctual. Situations are realized on

the clause level not by individual verbs, although verbs contribute the most important information. All languages make the above-mentioned semantic distinctions. However, such distinctions have different linguistic realizations across languages. Viewpoint aspect makes a situation visible in some way out of a limited range of possibilities, for example, as an unanalyzed whole, or as ongoing with no specific reference to its beginning or end. These two components interact with each other in language-specific ways and result in language-specific patterns of use. For example, while the perfective viewpoint is considered not available for stative situations in English, Chinese and Russian, it is nevertheless available for all types of situations in French, states included. For any situation in a language, information from both of these two components contributes to its temporal interpretation.

In addition to the above-mentioned two components of aspect, temporal information comes from a third source, that is, the location of a situation with reference to certain point in time, whose grammatical category is known as tense. Smith (2000) adds another dimension to the discussion of the interaction among the components of temporality by focusing on the interaction between tense and aspect. As Ross (1995) pointed out, there has been a tradition that has long recognized the interdependence of tense and aspect, as exemplified in Bull (1971). However, it is Smith (2000) who systematically linked interpretation of tense to aspectual distinctions. She identified rules governing the interpretation of tense based on the feature of boundedness of the situation involved. A discussion of the interaction of temporal locations with aspectual features in more detail can be found in Section Three of this chapter.

Instead of proposing distinctive particles of *le*, I will apply Smith's (1991, 2000) theories to show that the meanings other than perfectivity are actually the results of the interaction among the three components of the temporal system, sometimes plus the working of pragmatic principles.

2. Pragmatics in the Interpretation of Temporality

Since time is a universal concept routinely encoded in our verbal communication, interpretation of temporality not only follows the above said rules but also follows principles that have their roots in other features of verbal communication. One overarching principle is that an utterance not only means something but also implies something else (Levinson 1983). What is implied depends, to a large extent, on the context and therefore changes as the context changes. So what is implied is not part of meaning proper but rather belongs to language use, which can always be overridden by the context. I will demonstrate that some of the meanings traditionally associated with *le* arise from particular contexts as implicatures and are not part of the meaning of *le*. And since it is the uttering of a sentence rather than the sentence per se as a linguistic unit that gives rise to implicatures, it is doubtful whether what is implied can be attributed to some word in the sentence.

3. The problems of the two distinctive les position

(a) Overemphasis on distributional criterion

The first problem with the position of two distinctive *les* is the overemphasis of the distributional criterion so that the so-called verbal *-le* and sentence final *le* are distinguished purely on the basis of their surface positions. Such a distinction creates

unnecessary confusion because it leaves *le* in too many contexts ambiguous. For example, intransitive verbs appear at the end of sentences, and therefore the same form could be both verbal *-le* and sentential *le*. In BA and BEI constructions, where the direct object has been fronted, the verb also appears at the end of the sentence and makes the verbal *-le*, if there is any, sentential *le* at the same time. There are also some serial verb constructions where the sentential *le* is actually the verbal *-le* of the first verb in the serial. The problem only gets worse when this distributional distinction is equated with functional distinction so that verbal *-le* is considered to encode perfectivity while sentential *le* something different, most probably one of the following: currently relevant state, perfect, inchoativity, or another meaning depending on the kinds of analysis and the terms one uses.

To begin with, the distributional criterion does not address the structural attributes of the *le* that appears in a specified position. The following sentence in (14) is considered to represent a quantified event and therefore favors the use of verbal *-le*, according to Li and Thompson (1981).

(14) *Wo kan le wu ben shu.*

I read LE five CI book

I read five books.

Since the verbal *-le* after the verb *kan* “to read” is the perfective particle, its function is to present the situation described in the sentence as bounded, in other words, as an

unanalyzed whole. However, the situation described in the sentence is *kan wu ben shu* “to read five books”, which is temporally bounded, not simply *kan* “to read”, which is temporally unbounded. So although the perfective particle *-le* immediately follows the verb, it actually does not present the situation described by the single verb *kan* but rather the one described by the verbal phrase *kan wu ben shu*. If a syntactic tree were drawn, it would be shown that *-le* does not dominate *kan* alone but rather dominates *kan* and its sister *wu ben shu*. Therefore, if the particle appeared at the end of the sentence, that is, following *kan wu ben shu*, it could still encode perfectivity. A sentence with a verbal *-le* and one with sentential *le* may not be equally acceptable. For example, it is correct to say *kan ye yi kan* “took a took” but incorrect to say *kan yi kan le*. But the key point is that as long as the particle occurs, whether after the verb or at the end of the sentence, the situation presented remains the same and the perfective viewpoint is always available. So the position of the perfective particle does not change the structure of the sentence at all, nor its meaning. Some might object by saying that the meaning is indeed different when the particle occurs at the end of the sentence. However, as I will show later in this chapter, the difference reported results from different temporal locations, information from a third component of temporality, which is independent of viewpoint aspect.

(b) *Internal inconsistency*

The second problem with maintaining that there are two distinctive *les* is that it leads to inconsistency. For example, according to Li and Thompson (1981), the particles in the following two sentences encode different meanings. The former, being sentential, is

claimed to encode change of state (a type of CRS), and the latter perfectivity, being post verbal. Since the status of the particle in (15) is controversial, it is glossed as LE.

(15) *tianqi leng le.*

Weather cold LE

It turned cold./It has turned cold./ It is cold now.

(16) *tianqi leng le henduo.*

Weather cold LE much

It turned much colder./It has turned much colder./It is much colder now.

However, the meaning of change of state is present in both sentence (15) and sentence (16). In sentence (15), the change is from not cold to cold and in sentence (16) the change is from not so cold to so cold. Why not claim that the verbal *-le* in sentence (16) also has the meaning of change of state? The counterargument would be that the change involved in sentence (15) is a change in kind from being not cold to being cold. But the change in (16) is not a change in kind but rather in degree. However, how cold is cold? What is the cutting line where warm ceases to be warm and turns into cold? Since adjectives such as *leng* “cold” encode gradable qualities so that change is not categorical, what sentence (15) really encodes is “the temperature has dropped so much that it is cold now”. It will become clear if we put sentence (15) and (16) together with the help of a conjunction *erqie* “and” to form sentence (17).

(17) *tianqi leng le, erqie leng le henduo.*

Weather cold LE and cold LE much

(The weather turned cold/has turned cold/is cold now, much colder, as a matter of fact.)

If it is claimed that sentential *le* in sentence 15 (the first *le* in sentence 17) encodes change of state, then verbal *-le* in sentence 16 (the second *le* in sentence 17) should too, because in sentence 17, the second clause only elaborates on the first one with the addition of an adjunct of degree. This runs against the claim that verbal *-le* encodes perfectivity but only sentential *le* encodes change of state.

(c) *Change of state is a derived meaning not the primary meaning*

A third problem of claiming two different *les* is that it is impossible to compute the meaning of sentence (15) if we start with the meaning of change of state. The meaning of a sentence is the sum of its constituents' meaning and the structural relations that hold between the constituents. Since sentential *le* in (15) is supposed to encode change of state, there have to be two states involved. The state encoded in the adjective *leng* "cold" is easy to identify. However, is being cold the state before the change or the one after the change? Some would say it is, of course, the end state, as native speakers all agree that one possible meaning of sentence (15) is "it is cold now" and therefore being cold must be the state after the change. However, native speakers' consensus does not necessarily mean the primary meaning of sentential *le* is change of state. How do they know that

being cold is the end state? Not until they got the meaning of the whole sentence “it is cold now”. Their reasoning is since the state that obtains at the time of speech is cold and there has been a change of state involved, being cold must be the end state. It turns out that native speakers’ intuition that being cold is the end state is an afterthought, the result of an inference. Native speakers cannot decide being cold is the end state unless they have successfully computed the meaning of the whole sentence. The truth is that there is no *priori* reason to favor being cold as either the initial state or the end state. That being cold is the end state is actually an implicature.

(d) *The existence of counterexamples*

The position of two distinct *les* whose functions correspond to their surface distributions is even more difficult to defend because of the existence of clear counterexamples. Contrary to what the position would predict, there are both examples of sentential *le* which clearly encode perfectivity and examples of verbal *-le* which encode change of state.

Question One: Does perfective/verbal *-le* occur in sentence final position?

The answer is absolutely yes. For example, verbal *-le* following intransitive verbs or following transitive verbs in BA and BEI constructions appears in sentence final position. so does verbal *-le* in some serial verb constructions. People arguing for two distinctive *les* generally do not challenge the above observation. Their objection to treating sentence final *le* as perfective is based on the existence of such examples as given by Ross (1995). Again, LE is used to gloss the particle.

(18) *Ta qunian biye le.*

He last year graduate LE

He graduated last year.

(19) *Wo yijing chifan le.*

I already eat LE

I have already eaten.

First of all, Ross (1995) did not claim that the particle *le* in the above two examples can not encode perfectivity. She emphasized the observation that there is something else that equating *le* with perfectivity does not explain. In particular, Ross argued that the two examples all convey the meaning of a new situation. I do agree with her intuition that they conveyed the meaning of a new situation. However, such a message is not part of the meaning proper of the sentences. For example, example (19) might imply a new situation “so I am not hungry” as a result of “I have already eaten”. However, context allowing, it is possible to say

(19') *Wo yijing chifan le, keshi wo hai e.*

I already eat LE, but I still hungry

I have already eaten, but I am still hungry.

The fact that such a message can be canceled proves that it is a conversational implicature, which is always cancelable. Implicatures arise out of some specific contexts and do not belong to the meaning proper of the sentence. Since the implication of a new situation is not part of the meaning of the sentence, it would be even farther-fetched to claim that it is the meaning of a particular particle in that sentence. Therefore, although there is an intuition that equating sentential *le* with perfectivity does not explain the whole range of possible meanings, the meaning of a new state is a message that the perfective *le* need not and cannot convey.

Even if we conceded that the above two examples conveyed new situations, they did so systematically not as a result of the particle *le* in them but rather because of the logical relations holding between two propositions involved. If what example (18) says is true, then it is also true that

(18') *Ta xianzai yijing biye le.*

He now already graduate LE

He has already graduated now.

In other words, that a situation “he graduated last year” is true entails that a new situation “he has already graduated now” is true too. Since entailment is a relation that holds between two propositions, we cannot say it is the particle *le* in the sentence, which happens to be sentential, that is responsible for conveying such a message.

Ross (1995) also observed that it sounds like a *le* after the verb *kan* “to read” is missing from the following sentence. And since it is the verbal *-le* that is missing, not the sentential *le*, what is semantically absent must be the perfective meaning and what is present must be whatever that a sentential *le* is supposed to encode.

(20) *Wo yijing kan wu ben shu le.*

I already read five CI book LE

I have already read five books.

It is a correct intuition that something is missing from the post verbal position. However, to claim that the meaning associated with that position must be absent too is not justified. As a matter of fact, the feeling of something missing argues for the very existence of the meaning of perfectivity. Smith (1991) explicitly theorized that a situation, regardless of its type, has to be presented in certain viewpoint, in other words, be made visible somehow. Then how to explain the surface absence of verbal *-le* in the example (7)? The answer is that the meaning of perfectivity is not necessarily absent but might be encoded by a particle that occurs in a different position. This does not establish that the sentential *le* in example (20) necessarily encodes perfectivity, but such a meaning for the sentential *le* is unquestionably possible. What could have excluded such a possibility, according to the traditional view, is that the sentential *le* has a distinctive meaning, namely, CRS. However, there is no explanation of why CRS meaning should be incompatible with perfectivity except for the circular argument that they have different distributions and

therefore they have different meanings. I argue that what the sentential *le* in the above example also encodes perfectivity. The reason it is claimed to have CRS is because of the semantic relation of entailment that exists between the sentences containing verbal *-le* and sentential *le* respectively. The entailment relation can be spelled out as: what happened sometime in the past has happened from the vantage point of present. So the observed difference between the so-called CRS *le* or sentential *le* and the perfective *le* or verbal *-le* is really not a difference in the meaning of the particle (they both encode perfectivity) but rather a difference in tense, that is to say, the situation they present has different reference points for temporal location. To put it in Reichenbach's (1947) framework, the situation *kan wu ben shu* "read five books" presented by the verbal *-le* has a point in the past as reference time but the situation presented with the sentential *le* has the speech moment as the reference point. The temporal relations among situation time, reference time and speech time can be illustrated in the following diagrams where E stands for situation time, R for reference time, and S speech time.

Verbal *-le*

Wo kan le wu ben shu.

I read LE five CL book

I read five books.

.....>

E, R S

Sentential *le*

Wo yijing kan wu ben shu le.

I already read five CL book LE

I have already finished reading five books.

.....>

E, R=S

Seen in this light, sentential or CRS *le* is actually a perfect (Li, Thompson, and Thompson 1982). The close relationship between perfect and perfective has been attested in many languages. Bybee et al (1994) found that historically perfective developed from perfect (what she calls anterior) as a result of the generalization of the meaning of the perfect. In the case of Chinese, Wang (1958) found that the suffix-like verbal *-le* developed from sentential *le*. Perfect is perfective with speech time as the reference time and therefore is more specific in meaning than perfective. Since the meaning of perfective is more general, it must be a better candidate for the basic function of *le*, not the CRS. That perfect is more specific in comparison with perfective can also be attested in the further development of perfect in Romance languages. According to Dahl (1999, 34), a well known diachronic path of development in Romance languages has been documented by which the perfect has taken over the territory of old perfective by appearing in narrative clauses. The condition for a perfect to appear in a narrative clause is that it is freed from attachment to the speech moment and become more general in meaning as a result.

It is common that as a morpheme becomes grammaticalized, the morpheme in a later stage of development may still retain some of its old functions in certain restricted contexts. In the case of particle *le*, perfective *le* still retains its old function of perfect in some contexts, namely the double *le* construction.

(21) *Wo yijing kan le wu ben shu le.*

I already read LE five CI book LE

I have already read five books.

The sentential *le* in example (21) encodes its old function of perfect, that is, perfective with speech moment as the reference time while the verbal *-le* encodes the new function of perfectivity, which is more general and not restricted to speech time as the reference time. The meaning of perfectivity is doubly encoded because the verbal *-le* and the sentential *le* co-occur in the same sentence, giving rise to “the semantically marked nature of double *le* sentences as opposed to correlate sentences with only sentential *le* or only verbal *-le*” (Chappell 1986).

So far, I have discussed perfect in such a way that it is considered to be perfective with speech time as the reference time. To be exact, speech time is only the default reference time for perfect. Given certain contexts, perfect can have reference time other than the speech time, as long as the reference point is temporally after the time of the presented situation. The reason that it has to be to the right of the situation time is because perfect (anterior in the term of Bybee et al 1994) has the meaning that something

has already been done or finished by the time in question. For example, the sentential *le* in (22) is a perfect and the temporal expression *mintian xiawu* “tomorrow afternoon” explicitly expresses the reference time.

(22) *Mingtian xiawu wo jiu dao niuyue le.*

Tomorrow afternoon I then arrive New York LE

This time tomorrow I will have already arrived in New York

The situation *dao niuyue* “arrive in New York”, presented in the perfective viewpoint, is located with reference to tomorrow afternoon, a point in time that is itself located after the speech time. In Reichenbach’s (1947) framework, the relations among the three times could be represented in the following diagram.

.....>
S E, R

Regardless of the location of reference time, a perfect still encodes perfectivity. The bottom line is that as a separate component of temporality, tense serves to locate a situation in time. It does not either change the type of situations it locates nor the way it is presented.

Question Two: Is verbal *-le* sometimes associated with CRS?

The answer is again yes. If one argues that the sentential *le* in sentence (15) encodes CRS, then he/she has to claim that verbal *-le* in the following sentence also encodes change of state. The reason is that *leng* “cold” and *you yi ba bi qian* “have a big amount of money” both denote stative situations.

(23) *Zhangsan you le yi da bi qian.*

Zhangsan have LE one big sum money

Zhangsan has acquired a big amount of money.

Shi (1990) argued that the verb *you* in sentence (23) is inherently stative. However, Ross (1995) objects to categorizing *you* “have, own” in the above example as stative citing that the best English translation for the sentence is “Zhangsan has acquired a lot of money” and therefore the verb *you* must encode non-stative meaning of “acquire”. However, translation equivalence is not a reliable way to determine the meaning of a grammatical morpheme in a sentence. It is a fact that a concept can be expressed by different forms in different languages. The linguistic form encoding a concept could be a single word in one language but a phrase or even a sentence in another. Even if two languages use the same category to encode a concept and translation equivalence can be achieved, one cannot claim that the two forms from the two languages respectively encode the same concept. For example, the nominal phrase in Chinese *ta canyu sheji de feiji* can be translated into English as “the plane that he helped design”. However, to claim that *canyu* “participate” means “help” because it is translated so is misleading. The fact that the above sentence is

translated into “Zhangsan has acquired a lot of money” does not guarantee that Chinese uses a main verb that is equivalent to “acquire” in English. If that were the case, translation in general would be a much easier task. As I have shown previously, that the example (15) *tianqi leng le* can be translated into “it is cold now” does not necessarily mean that the particle *le* in it encodes present tense but rather that stative situations presented in perfective viewpoint conventionally imply present tense. That the verb *you* in sentence (23) can be translated into “acquire” is because the stative situation *you yi da bi qian* “to have a large amount of money” interacts with perfective viewpoint, resulting in inceptive/inchoative interpretation, which can be literally translated as “come to have”, or more felicitously “to acquire”.

Besides, the argument that the verb *you* changes its aspectual class in sentence (23) and as a result means “to acquire” instead of “to have” leads to the conclusion that “to write” in “to write a report” changes class too and means something like “finish writing something” rather than simply “writing”. It is true that aspectual class is contextually determined. But the classification of aspectual classes is based on the clause as a whole not just on the verb. Although verbs contribute the most important temporal information to a situation, other constituents such as direct objects and temporal adverbs contribute crucial information too. Therefore, verbs such as “read” and “write” by themselves denote activities, which are temporally unbounded. However, “read three books” and “write a report” denote accomplishments, which are temporally bounded. The verb class “read” and “write” belong to does not change with the addition of those direct objects. What changes is the type of situation which is classified on the basis of the clause.

Another reason Ross (1995) rejects verb *you* as stative is because it is ungrammatical with intensifier *hen* as shown in example (24'). However, sentence (24') is ungrammatical not because *youqian* is not a state but because *hen* clashes with the temporal value of perfective viewpoint. Ungrammaticality as a result of incompatibility of perfective viewpoint and intensifier does not prove a situation presented in such a viewpoint is incompatible with the intensifier.

(24) *ta hen you qian.*

he very have money

He is very rich.

(24') **ta hen you le qian.*

I very have LE money

Besides, *hen* can only test adjective states but not states in general. Sentence (25) clearly denotes a state "I have a lot of money". However, it is incompatible with intensifier *hen* anyway, even if *le* is absent in sentence (25'). Therefore, a test using *hen* is not a reliable test of stative situations in general.

(25) *Wo you yi da bi qian.*

I have one big sum money

I have a lot of money.

(25') *wo hen you yi da bi qian.

I very have one big sum money

4. *The Solution*

In this paper, I am proposing a solution that treats perfectivity as the basic function of particle *le* in Chinese, regardless of its syntactic position. Other functions associated with the particle are explained by citing grammatical rules governing the interactions among the three subsystems of temporality and principles of language use.

(a) *The interaction of perfective viewpoint and stative situations*

As early as in Thompson (1968) it was recognized that *le* is “almost a perfective aspect in the way that it interacts with event boundaries”. He proposes an analysis of *le* in sentence (15) and (16) in terms of event boundaries in which a single word *le* is interpreted as inchoative or perfective depending upon whether it interacts with an initial boundary or a terminal boundary respectively. Such an analysis foreshadows the possibility of explaining some of the functions of *le* in terms of interaction between the two components of aspect as exemplified in Smith (1991), that is, in terms of the interaction of perfective viewpoint and stative situations. However, Smith did not take the step and instead claimed that Chinese be grouped together with English, Russian and Navajo in that perfective viewpoint is not available to states in these languages. By doing so, she stays in line with the traditional view that sentential *le* is different from verbal *le* and does not encode perfective viewpoint.

Bybee et al (1994, 74-78) provided convincing evidence from languages in the world that perfective morphemes tend to be associated with non-stative situations in their grammaticalization process. As they became more grammaticalized, and their meanings more generalized, they were extended from non-stative situations to stative situations. Shi (1990), who also argues for a single *le*, explicitly proposes that *le* interacts with the boundary of the situation and encodes anteriority. However, the reference point of the anterior relation depends on the type of situation *le* occurs with. When *le* occurs with situations with inherent boundary (terminal), the anteriority is relative to the terminal boundary. In contrast, when it occurs with states, it signals anteriority relative to the initial boundary, an interpretation associated with the inchoative/inceptive meaning. Therefore, in modern Chinese, perfective viewpoint is available to states as well. The way it interacts with stative situations is, as Thompson (1968) suggested, to interact with the initial boundary of the situation and therefore the result highlights the inception of the stative situation. The inception of a state of course implies the state so entered is a new state, and since it is a new state, it presupposes an old state and therefore leads to the proposition that there is a change of state. The popular change of state meaning turns out to be not a good candidate for the basic function of the particle, because it can be explained by the way perfectivity interacts with stative situations plus implicature by virtue of presupposition.

Ross (1995) has tried to problematize Shi's (1990) analysis by pointing out an alleged inconsistency in his definition of states. In particular, she pointed out that Shi (1990) on the one hand defines states as "stable situations that do not change" and claims that

endpoints are not part of the state, and on the other hand, he relies on the assumption of the existence of initial boundary for his analysis. However, it is not necessarily a contradiction.

First of all, it should be pointed out that the definition of states as stable situations that do not change is not precise. A more precise definition is found in Smith (1991) where states are defined as non-dynamic, durative, and unbounded, consisting of undifferentiated period and requiring external agency for change. Therefore, ideally, a state involves no change within its own temporal structure and is expected to continue in time unless some external force acts on it and brings about changes whereby the state ceases to obtain. That states do not change, to be exact, refers to their homogeneous internal structure. In other words, as long as a state obtains, there is no change involved in any interval within its span. However, states are indeed subject to possible changes if being acted upon by external force; states differ in the degree of stability, as can be seen from the following examples.

(26) *Ta xing zhang.*

He surname Zhang

His surname is Zhang.

(27) *Ta hen e.*

He very hungry

He is hungry.

These two examples illustrate the distinction between individual-level predicates and stage-level predicates (Yeh 1993). While we normally expect the state of his having a surname of *Zhang* (stage-level) to hold for the span of his life, we do not expect the state of his being hungry (individual-level) to last more than a few days. That states are stable is really a matter of degree and therefore states are subject to change in different degrees. A state can have terminal endpoint when it does not obtain anymore and has initial endpoint at the time of its inception. An argument could be made that such endpoints are not inherent to the state but rather pragmatically provided. Such a line of argument will probably shed light on the role of pragmatics in the interpretation of temporality but will not be followed in this article, because whether states can have an initial endpoint boils down to the ontological status of states as situations. As Kamp and Reyle (1993) suggested, states and events, or any situations for that matter, should be considered discourse entities themselves. Then the coming about of a state is not an issue anymore. After all, we all agree that having the surname of *Zhang* is a state and is a stable state. However, under normal circumstances we do not ask when someone came to have this surname. Similarly, unless acted upon by an external agent, whether or when a state comes to an end is not an issue either, as we do not ask when someone will stop to have *Zhang* as his surname.

To reiterate the above analysis, making perfective viewpoint available to stative situations removes the obstacle to treating sentential *le* as encoding perfectivity and paves the way for explaining closely related functions such as CRS in terms of the way

perfective viewpoint interacts with stative situations and if necessary in terms of the working of pragmatic principles.

(b) *The interaction between tense and aspect*

So far, I have demonstrated how the interaction between the two components of aspect plus pragmatic principles gives rise to some of the functions associated with particle *le*. To be specific, I agree with Thompson (1968) that perfective viewpoint interacts with the boundary feature of a situation and argue that it interacts with the initial boundary of a stative situation and the interaction gives rise to the meaning of inchoativity or change of state. Within the three-dimensional system of temporality there is also the interaction between tense and aspect. That tense interpretation depends on aspect has been observed in many languages. For example, Comrie (1999, 364) observes that in German the non-past tense sometimes receives present tense interpretation and sometimes future tense interpretation. In the absence of temporal adverbials, sentences expressing states tend to be interpreted as having present tense but sentences expressing events tend to be interpreted as having future tense. Recognizing that the source of temporal boundedness of a situation can either be its inherent temporal feature, for example it is telic or atelic, or be the way it is presented, for example, in the perfective or imperfective viewpoint, Smith (2000) proposes that temporally bounded situations be interpreted to have past tense unless otherwise indicated while temporally unbounded situations be understood to have present tense. Since it is argued in this paper that perfective viewpoint is available to stative situations, then why do stative situations

presented in perfective viewpoint like the one in sentence (15) habitually receive present tense interpretation?

Before giving the answer, it should be pointed out that sentence (15) can indeed receive past tense, indicated by one of the English translations “it turned cold”. The fact that the sentence in question habitually receives present tense is because in addition to the implication of change of state, there is a second implicature involved when sentence (15) was uttered, which gives rise to the interpretation that it has present tense. In the case of the first implication, it is the semantic relation of presupposition that gives rise to the interpretation of change of state. The inference works in this way: the inception of a state presupposes the existence of an old state and therefore there is a change of state involved. In the case of the second implication, it is the pragmatic principle of “be informative” (Levinson 1983) that gives rise to the interpretation that sentence (15) has present tense. According to Smith (1991), the inception of a state is an event itself, belonging to the situation type of achievement, and therefore is temporally bounded. It is by default understood to have past tense. However, by definition, a state is non-dynamic and has homogeneous internal temporal structure. Therefore, the newly started state is expected to continue in time unless interrupted by an external force. So unless otherwise indicated, sentence (15) is taken to imply that the new state so started continues in time and still obtains at the speech moment. Although the utterance of sentence (15) does not say explicitly that the new state still obtains, the principle of “be informative”, which says an utterance is believed to convey as much information as possible unless contradicted by the context, makes it possible to read that proposition into the sentence as an implication.

And since it is something implicated, it is always cancelable. For example, when describing the abnormal weather pattern in late fall when it should be cold, one might say

(28) *tianqi leng le, keshi xianzai you re le qilai,*

It cold LE but now again hot LE up

zhen rang ren zhuomo bu tou.

really make people guess not through

It was cold and now it is warming up again. It is really unpredictable.

The implication that it is cold at the time of speech is overridden by the context which clearly says that such a state does not obtain any longer.

This way of encoding present tense is not an isolated phenomenon. Bybee et al (1994, 74) observed that in many languages in the world, perfective morphemes in certain stages of grammaticalization yield a sense of “present state exists” when they occur with stative predicates.

5. Conclusion

The traditional distinction of verbal *le* and sentential *le* is made purely on the basis of surface distributions. However, it has been shown in this section that there is no simple equation of this distinction with functional distinction. To suggest two distinctive *les* does not increase the explanatory power of the theory but instead leads to inconsistency. In the alternative framework proposed in this account, the meaning of particle *le* in modern Chinese can be reduced to the single function of encoding perfective viewpoint. All the

other functions that have come to be associated with the particle can be explained on the basis of this basic function in a three-dimensional framework of temporality which recognizes three independent and yet interacting components, namely situational aspect, viewpoint aspect and temporal location, and if there is the need, with the help of pragmatic principles, in particular that of conversational implicature and that of informativeness.

Perfective *guo*

Another perfective viewpoint marker in Chinese is *guo*. The viewpoint indicated by *guo* presents a situation as a whole, as does *le*. However, it contrasts with *le* in that *guo* always expresses a kind of discontinuity. Sentences (29a) and (29b) are classical examples given by Chao (1968).

(29a) *wo shuai duan le tui.*

I fall break LE leg

I broke my leg.

(29b) *wo shuai duan guo tui.*

I fall break GUO leg

I once broke my leg. (and of course I am fine now)

The discontinuity is with reference to the reference time of the sentence. When the present is the reference time, it indicates a discontinuity with the present situation. In the above example (29b), the situation *wo shuai duan tui* “I break my leg” describes a state

of affairs in the past, but the presence of *guo* indicates that this situation no longer obtains at the time of speaking. In contrast, the situation in (29a) describes one in the past, with no particular reference to the present. In this sense, particle *le* in (29a) is a perfective viewpoint marker, but *guo* in (29b) is more like a perfect marker, because it always works with reference to particular time, most commonly the speech moment.

1. *Interaction of guo with Situation Types*

States cannot be presented by perfective viewpoint. States that describe class membership and property are rarely found with *guo*. However, states expressed by stage-level predicates can be presented by *guo*.

(30) * *ta shi guo laoshi.*

S/He is GUO teacher

S/He was once a teacher.

(31) ? *women nianqing guo.*

We young GUO

We were young.

(32) * *zhe jian shi wo zhidao guo.*

This CL thing I know GUO

I had known about this matter (but have forgotten now).

That states are incompatible with *guo* can be explained by the fact that states will not change of themselves. Without external force, they are expected to hold. However, *guo*

by definition indicates a discontinuity which necessarily implies that the state ceases to hold. These two values contradict each other. Therefore, *guo* is rare to find with states, except perhaps with stage-level predicates, for example in (31). However, unlike *le*, which interacts with states by making visible the inception of a new state, *guo* always implies discontinuity with a previous state.

(33) ? *women nianqing guo.*

We young GUO

We were young.

(33*) *women nianqing le.*

We young LE

We become younger.

This contrast also supports the argument that *le* with states does not express change of state. If it does, we can argue that *guo* also indicates change of state, although it always indicates a change out of a present state.

Activities can be presented in the perfective viewpoint of *guo*.

(34) *Wo chi guo lichi.*

I eat GUO lychee

I have tried (at least once) lychee.

Semelfactives can be presented in the perfective viewpoint of *guo*. However, it is better to treat semelfactive presented by *guo* as activities. To say that *ta shang ge yue kesuo guo* “he coughed last month” indicates a single act event sounds strange. Although it is possible to use *guo* to express such a situation, normally it is interpreted as meaning multiple instances of coughing. This shows again that in Chinese semelfactives readily shift into activities.

Accomplishments can also be presented by *guo*, as the following example shows.

(35) *Wo kan guo yi ben yingwen shu.*

I read GUO a CL English book

I have read an English book.

Achievements can be presented by *guo* as shown in Chao’s example.

(36) *wo shui duan guo tui.*

I fall break GUO leg

I have once broken my leg.

The Imperfective Aspect in Chinese

The perfective forms present situations as having boundaries without reference to their internal temporal structures. Even situations with internal structure become a compact unanalyzed whole when presented in the perfective. In contrast, it is the imperfective that

focuses an interval of a situation and presents only part of it without reference to either of the endpoints the situation might have. From the definition of imperfectivity, “it follows that imperfective forms cannot be used to refer to situations lacking internal structure” (Comrie 1976, 26). Therefore, there is an inherent incompatibility between imperfective aspect and states because states have homogenous temporal structure. When states are presented in an imperfective aspect, the interaction of such situation type with the viewpoint aspect imposes a stage-like internal structure on the stative situation and coerces the state into a non-state. Such incompatibility also exists between imperfective viewpoint and achievements, because being [-durative], achievements do not have internal structure to accommodate the imperfective viewpoint. In Chinese, imperfective viewpoint is generally not available to achievements. Imperfective viewpoint is realized in Chinese by two morphemes, *zai* and *zhe*. While *zai* always presupposes dynamicity of the situation presented, *zhe* always indicates durative situations. For detailed discussion of these two markers, please refer to Chu (1998).

Progressive *zai*

Zai is the progressive aspect marker in Chinese. It has its origin as an existential verb, then later on evolved into a locative marker and now progressive marker. It still retains its existential and locative meanings. Unlike other markers or particles, *zai* precedes the verb. *Zai*, as the progressive aspect marker, presumes dynamicity. It naturally presents non-stative and durative situations focusing their internal structure. Stative situations do not have stage-like internal temporal structure (sub-interval property) and are therefore incompatible with *zai*. Progressive aspect also requires duration and therefore it cannot

present non-durative situations. Here are the possible interaction patterns between *zai* and the five situation types in Chinese.

States cannot be presented in the progressive aspect.

(37) **ta zai xing Li.*

S/He ZAI surname Li

S/He is having the surname of Li.

(38) **ta zai congming.*

S/He ZAI smart

S/He is being smart.

Activities and accomplishments can be presented by progressive aspect.

(39) *Ta zai tiaowu.*

S/He ZAI dance

S/He is dancing.

(40) *Tamen zai jian xin gejuyuan.*

They ZAI build new opera house

They are building the new opera house.

Semelfactives and achievements are non-durative and cannot be presented by *zai*.

When progressive aspect is imposed on semelfactives, the situation is shifted into an

activity which consists of iterative instances. In English, when progressive viewpoint is imposed on an achievement, what is presented by the viewpoint is the preliminary stage that leads to the final attainment. However, in Chinese an achievement cannot be presented by *zai*, not even the preliminary stage.

(41) *Wo tingjian ta zai kesuo.*

I hear s/he ZAI cough

I heard him coughing.

(42) * *women zai ying bisai.*

We ZAI win game

We are winning the game.

Durative *zhe*

Durative *zhe* has its origin as a main verb which means arrives at a target (place) and as a result stay attached to it (Wang 1958, 274). There are two aspects to the meaning of this word. First is the location, which explains its occurrence in existential constructions with such verbs as *fang* “put”, *bai* “arrange”, *zhuang* “load”.

(43) *qiang shang gua zhe yi fu hua*

wall on hang ZHE one CL painting

There hangs a painting on the wall.

The second is the attachment, which gives rise to its function of backgrounding a situation, when a situation presented by *zhe* serves to describe the background activity to a more dynamic and dominant event. In modern Chinese, it is available for marking durative situations, but non-durative situations like semelfactives and achievements are incompatible with *zhe*.

The interaction of states and *zhe* depends on the semantic features of the predicates that express the states. Stage-level predicates describe situations that are prone to change, and therefore many of them appear with *zhe*.

(44) *Ta mang zhe dao cha.*

3sg busy ZHE pour tea

He is busy pouring the tea.

In contrast, individual level predicates describe permanent attributes. *Zhe* is not available to them.

(45) **Ta xing zhe Li.*

S/He surname ZHE Li

S/He is having the surname of Li.

(46) **ta zhidao zhe zhe jian shi.*

S/He know ZHE this CL thing

S/He is knowing the answer.

(47) * *ta piaoliang zhe.*

She pretty ZHE

S/He is being pretty.

The durative marker *zhe* still retains some lexical content of the original verb that is the source of this grammaticalization. That is to say, the situations presented by *zhe* need to involve an event that results in a state. All the examples of existential construction presuppose an event that leads to the state described by the clause. So *qiang shang gua zhe yifu hua* “there hangs a painting on the wall” can be regarded as the resultative state of an event of “hanging up a painting”.

Zhe can present activities.

(48) ? *Wo kan zhe shu.*

I read ZHE book(s)

I am/was reading.

This sentence is questionable not because it is ungrammatical but because a situation presented by *zhe* has backgrounding function and it needs a main clause both to be complete syntactically and to be temporally anchored. This is true when it is used with other non-stative situations.

(49) *Ta xiao zhe shuo...*

S/He smile ZHE say

S/He says/said with a smile on his/her face.

In this example, *zhe* presents the situation *xiao* (to smile) as ongoing and subordinate to the main situation *shuo* (to say).

Zhe is incompatible with semelfactives because they are [-durative]. When it does present semelfactives, the durative aspect *zhe* shifts them into activities.

(50) ? *Haizi men tiao zhe.*

Children PL jump ZHE

The children are jumping.

Zhe can present accomplishments which are durative by definition.

(51) ? *Ta he zhe di san bei jiu*

S/He drink ZHE ordinal three CL wine

S/He is/was drinking his/her third cup of wine.

Zhe is incompatible with achievements because they are [-durative].

(52) * *wo wang zhe.*

I forget ZHE

I am forgetting.

Finally, there is in Mandarin a third way of expressing imperfectivity, with the help of sentence final particle *ne*. Since it is not aspectual but rather modal, it is not discussed in this dissertation. For a detailed discussion of the function of sentence final *ne* in expressing imperfectivity, please refer to Chu (1998).

Neutral Viewpoint in Chinese

Smith (1991, 119) argues that aspectually vague sentences, “which have neither a perfective nor an imperfective morpheme, should be analyzed as having the neutral viewpoint.” The postulation of a neutral viewpoint is motivated by consideration of the internal consistency of the theory. Since viewpoint aspect is defined as ways of making a situation visible and every situation has to be visible in discourse, a situation not marked for either perfective or imperfective has by theory to be made visible somehow. Theoretically more than one interpretation is plausible; convention of use and contextual information strongly favor a particular one. However, in the case of Chinese, neutral viewpoint is the norm. The majority of clauses in Chinese are in neutral viewpoint, i.e. unmarked.

Situations in Chinese which are presented in a neutral viewpoint can arise from different circumstances. One type of circumstance is, due to the analytic nature of the Chinese language, when the situations have clear lexical content that indicates whether they should normally be understood as open, which is compatible with imperfective or closed, which is compatible with perfective. For example, states are by definition

[+durative] and [+stative] and have homogenous internal temporal structure. They do not need the imperfective viewpoint to bring attention to their internal structure and thus appear naturally in neutral viewpoint. Telic situations realized by verbs plus complements do not need perfective viewpoint for their endpoint to be visible, either. Ambiguity is typically resolved with the help of context. The third type might be historical, as some verb forms have survived as fixed forms and they simply do not go with viewpoint particles which are the results of relatively recent developments.

Since viewpoint aspect in Chinese is variably marked, to describe it is a challenge. A comprehensive description is necessarily a combination of a probabilistic rules and categorical rules, if not entirely probabilistic in nature.

Section Three. TEMPORAL LOCATION

I will start this section on temporal location with the explicit conviction that every sentence has to be temporally anchored in order to be correctly interpreted. In some languages the expression of temporal location has been grammaticalized. The grammatical category encoding to the location of situations in time is commonly referred to as tense. Temporal locations can also be expressed by devices other than the grammatical category tense, for example by periphrastic constructions and by lexical means such as temporal adverbials, and sometimes with the help of aspect and even discourse rules.

It is a necessity that a sentence be temporally located, because sentences in different tenses bear different truth values. For example, the same situation “work for the mafia” entails a different state of affairs when it is located in different time worlds.

He used to work for the mafia.

He is working for the mafia.

He will work for the mafia.

For a person charged with organized crime, the differences between the above three sentences have life-bearing significance.

In this section, I will first illustrate temporal locations in the framework of Smith (2000) and expand it by drawing attention to the role of context in determining temporal locations. And then I will discuss temporal locations in narratives.

Temporal Locations of Situations

Like locating an object, determining the temporal location of a situation requires a reference point. Cross-linguistically, the most commonly used reference point is the speech moment. Utterance time, or the time of the speech moment, is conveniently set as the default reference point. This is especially true with Chinese, which does not have grammatical tense. Once a reference point is selected, there can be only three possibilities in terms of the location of the situation. The first is that the situation time overlaps the reference time. In that case, the situation is said to have the present tense. The second is that the situation is located before the reference point, which is said to have past tense. And the third possibility is that the situation is located after the reference point, which is called future tense.

Tenses with speech moment as the reference point are called absolute tense.

Sometimes the reference time can be some point on the axis of time other than the utterance time. Such tenses are called relative tense: for example, the past in past tense, also known as the pluperfect, has a reference point which is itself before the speech moment. To relate the situation to the speech moment, a second temporal relation, that between the reference point and the speech moment, is necessary.

Unlike aspect, which describes the internal temporal structure of a situation, tense locates a situation by relating it to a reference point. However, aspect does play a role in determining the location of a situation. Comrie (1999, 364) observes that in German the non-past tense sometimes receives present tense interpretation and sometimes future tense interpretation. In the absence of temporal adverbials, sentences expressing states tend to be interpreted as having present tense but sentences expressing events tend to be interpreted as having future tense. Smith (2000) proposes a generalized pattern of temporal interpretation for clauses in the absolute tense which relies on the aspectual notion of boundedness.

- (i) Unbounded eventualities are located at speech time.
- (ii) Bounded events are located before speech time.
- (iii) Explicit temporal information overrides (i) and (ii).

It should be pointed out that the feature of boundedness of a situation can be determined from two sources. The feature could be inherent in the situational semantics

or it could be provided by certain viewpoint aspect. Also, (i) and (ii) can be overridden by contextual information, which is not linguistically explicit.

Smith (2000) proposes that in Chinese clauses expressing states and ongoing events receive present tense, clauses expressing bounded events receive past tense, and clauses expressing other possibilities will have other overt temporal expressions to so indicate.

(i). Unbounded situations are located at speech time.

(53) *Zhongguo renkou you shisan yi.*

China population has thirteen hundred million

China has 1.3 billion people.

(54) *Haizi men zai xue huahua.*

Child PL ZAI learn paint

The children are learning how to paint.

The situation in (53) is unbounded because it is a state, which is unbounded by definition. The situation in (54) is an activity, which is also unbounded. The imperfective viewpoint *zai* also presents the situation as unbounded. Therefore, both (53) and (54) are understood to have present time reference.

(ii). Bounded situations are located before speech time.

Similarly, a situation could be bounded because it is presented in the perfective viewpoint or its lexical content encodes such boundary.

(55) *yige xiaohai cong na bian guo lai.*

one child from that side over come

A child came over from that side.

(56) *tamen dao le bali.*

They arrive LE Paris

They arrived in Paris.

The situation in (55) refers to an accomplishment, which is bounded. That in (56) is an achievement, which is also telic and presented in the perfective viewpoint. Both (55) and (56) are bounded and understood to have past tense.

(iii). Explicit temporal information overrides (i) and (ii).

Unbounded situations located not at the speech time, for example, in the past (57) or in the future (58), have to be expressed overtly, with the addition of adverbial *kancai* or modal verb *jiang*, which both have future reference.

(57) *Zhongguo renhou jiang you shisan yi.*

China population will have thirteen hundred million

China will have a population of 1.3 billion.

(58) *Haizi men gangcai zai xue huahua.*

Child PL just now ZAI learn paint

The children were learning how to paint a while ago.

Bounded situations that are not in the past and thus in the present or in the future have to be expressed overtly, for example with adverb *yijing* “already” (59), which relates the situation to the present, or with the modal verb *hui*, which has future reference (60).

(59) *tamen yijing dao bali le.*

They already arrive Paris LE

They have already arrived in Paris.

(60) *tamen yao dao bali le.*

They going to arrive Paris LE

They will arrive in Paris soon.

(iv). Temporal location is decided by the context.

I propose a fourth pattern of tense interpretation to supplement the three proposed by Smith (2000). It is based on the observation that sometimes the temporal location of a situation is to a great extent determined by the speech context rather than by the boundary feature of the situation. For example, the same utterance *kai hui le* “to convene, have a meeting” could receive different tense interpretations, sometime past tense, sometimes present and sometimes future, depending on the context.

Interpretation of Temporal Locations

The purpose of this sub-section is to demonstrate how the theory handles controversial cases of temporal interpretation in Chinese, highlighting the role of discourse context in determining the temporal location of a situation. I will explain how sentences with

particle *le* receive different temporal interpretations in different contexts. Before going into any details, I want to reiterate the point made in the previous section, i.e. the uses of the particle *le* have been confused with its meaning. Different interpretations of a sentence do not mean that the particle *le* in the sentence has different meanings. Principled explanation is needed to distinguish meaning that is inherent in the particle and the messages that arise out of the context as a result of the use of the particle.

It is observed that activities in Chinese receive different interpretations depending on the context. For example, the situation expressed by *kaihui* “to convene, to have a meeting” can have different temporal locations depending on the context. The example is attributed to Professor Xiwen Ma from Beijing University. Here is a list of what it could mean in some typical contexts.

(61) *Kai hui le* could be uttered

- (a) when seeing people going into the conference room one after another, which means "there is going to be a meeting";
- (b) or by the conference chairperson to announce that the meeting officially starts;
- (c) or when some people keep talking to each other after the announcement so as to remind them that they are in a meeting;
- (d) or when the conference break is over to remind people to come back to their seats;
- (e) or when seeing people streaming out of the conference room;
- (f) or by a person walking by the conference site and seeing the “In Session” sign

lighted;

(g) or by a journalist to the public any time during the meeting or after the meeting.

In all the contexts from (a) to (g), the verbal expression *kai hui* “to convene” refers to the same situation, an activity which bears the features of [-stative], [-telic], and [+durative]. And yet the utterance *kai hui le* could convey a different message in each case. According to the traditional definition, the particle *le* in the utterance is sentential *le* and expresses Currently Relevant State (CRS). I have shown in the last section that such categorization is problematic, which becomes clear when one tries to determine what is the state involved, in what way it is relevant to another situation, and what time it is current with. Meanwhile, the different temporal orientations exhibited in the above contexts also imply that the particle *le* is not so much a marker of tense as argued by Klein, Li and Hendriks (2000), a point I will substantiate by analyzing the temporal relations involved in each case.

I want to add that the traditional distinction of verbal *-le* and sentential *le* is irrelevant to example (61), because in each interpretation (a) through (g) the particle *le* is sentential. I will maintain that the particle *le* in (61a) through (61g) all encode perfectivity. What make a difference in the meaning are the way perfective viewpoint interacts with atelic situations and the contextual information which provides information on the temporal location of the situation involved. Another point that should be made is that the above list also shows that Smith’s (2000) prediction of tense interpretation only applies to sentences

in isolation, for predictions (i) and (ii) for unbounded and bounded situations could be overridden not only by temporal adverbials but also by contextual information. For example, in (61a) no adverbial is used and yet the situation described is unquestionably located after the speech situation. Another wrong prediction by Smith would be that (61c) and sometimes (61f) would be interpreted as located before the speech moment when they actually overlap the speech time and have present tense interpretation.

Contextual information in (61a) indicates that the situation *kaihui* “to convene” is located after the speech moment and therefore has future tense. (Sometimes the temporal location can be explicitly expressed. For example in the sentence *kuaiyao kai hui le* “The meeting is going to start soon”, the word *kuaiyao* “is about to” indicates that the situation of meeting is located in the near future.) Since activity does not have an inherent terminal endpoint, no reference is made to it. When presented in the perfective viewpoint, the initial point of the situation is made visible. In this sense, activities behave very similarly to states where the inception into a state is the focus. For similarities between states and activities in terms of temporal features, please refer to Smith (1999). The temporal location of (61a) can be schematically represented as

Kai hui le.
>
 S R,E

Utterance (61b) has the meaning of “the meeting starts now”. Again, as the situation does not have an inherent terminal endpoint, and its initial point is located right at the

speech moment, what is made visible by the perfective viewpoint is the initial point of the situation and therefore the utterance has the meaning of start.

Kai hui le.
>
 S,R,E

Utterance (61c) has the meaning that "We are in the middle of a meeting. Please be quiet". In (61c) *kai hui* "to convene", an activity, is used to express the state that "The meeting has started and we are in the session", which obtains at the moment of speech. The perfective viewpoint expressed by *le* makes visible the initial point of the activity. However, an activity is durative. And according to the pragmatic principle of being informative (Levinson 1983), an activity already started is expected to take a period of time. Therefore, the activity of convening is assumed to be going on at the speech moment. That is why (61c) implies the activity is under way. The situation is durative and its event time (E) includes the reference time (R), which coincides with the Speech time (S).

Kai hui le.
>
 E R,S E

Utterance (61d) actually means that the meeting resumes (restarts) after the break. The perfective viewpoint makes visible the initial point of the situation (a second instance of

the situation) and the contextual information indicates that it is located after the speech moment. That part of the meaning of "start again after a break" is understood from the context, because people are in the break when (61d) is uttered. So in Chinese, "again" is not encoded as it is in the English form re-sume. The meaning in (61d) in the above context is literally the same as in (61a). The only difference is it is uttered during the break. The temporal location of the situation can be represented schematically as

Kai hui le.
>
 S R,E

The context of utterance (61e) indicates that the situation of *kai hui* is located before the speech moment, as people are streaming out of the conference room when (e) is uttered. The activity does not have an inherent terminal endpoint nor does the perfective viewpoint make it visible. However, since the situation is located in the past, the situation must have come to its end by the speech moment, an inference that is supported by the context. In this case, the terminal endpoint of the activity is arbitrarily supplied by the context as Smith (1999) suggested. The temporal relations in (61e) can be represented as

Kai hui le.
>
 E,R S

For utterance (61f), imagine someone uttered *kai hui le* when passing by the conference room and seeing the flashing "In Session" on the door. The message is "I see.

They are having a meeting". The temporal feature of (61f) is the same as that of (61c), only uttered by someone who just discovered that a meeting is going on. The classical example given by Chao (1968) *xia xu le* "It's raining", a sudden realization on the speaker's part, can be explained in the same way.

Finally, suppose a journalist covering the meeting writes *renda kaihui le!* (61g) "The People's Congress has convened"! This resembles the "hot news" use of perfect in English. The reason that perfective viewpoint used in this utterance can convey the message of hot news is that perfective viewpoint with coinciding reference time (R) and speech time (S) is functionally equivalent to Perfect. Because of the unboundedness of activity, *renda kaihui le!* "The People's Congress has convened!" does not necessarily indicate that the meeting is already over. However, as long as the meeting has started at the time of reporting, such analysis of temporal location is applicable. The temporal location of the situation can be schematically represented as

Kai hui le.
>
 E R,S (E)

If the situation *kaihui* "to convene" is true at the time of utterance, the representation should be the same as that for (61c). If the meeting is over by the time of utterance, then it should be represented as

Kai hui le.
>
 E R,S

What is clear from the above discussion is that tense interpretation depends to a certain extent on the boundary feature of the situation involved. Bounded situations receive past tense interpretation and unbounded situations present tense interpretation unless the presence of temporal adverbials indicates otherwise. However, the picture is not complete without considering the role of context in tense interpretation. In particular, activities presented by the perfective particle *le* draw attention to the way temporal interpretation obtains with input from both semantics and pragmatics. It is clear that the semantic information that defines a situation type has a role to play. For example, activities are durative. It is because of this feature that the pragmatic principle of “be informative” can be applied to yield the implication that an activity once started is expected to continue in time. At the same time, the temporal value of the perfective viewpoint also has to be considered, because it presents a situation as an unbreakable whole. When a situation, such as an activity and a state, is not bounded, what the viewpoint makes visible is the initial point and at least one subinterval after the initial point. This is the reason that in certain contexts we interpret activities as “having started”. Most importantly of all, context supplies the most reliable information about temporal location in utterances (61a) through (61g). For example, it is because of context that we know that the situation is located after the speech time in the cases of (61a) and (61d), that the three times needed to locate a situation coincide in (61b), that the event time includes the speech time in (61c), and that the event time precedes speech time in (61e). Context will also determine whether event time includes speech time or precedes it in (61f and 61g).

Temporal Locations in Narrative

Tense is by definition deictic: that is, it is relational. However, sometimes, it is not enough to locate a situation as being before or after the speech moment. The use of sentence initial adverbials such as *zuotian* “yesterday” not only indicates the situation described in the sentence is located before the speech moment, but also more specifically within the period of 24 hours before the speech moment. By all means, lexical resources for expressing temporal locations are much richer than the grammatical tense. This is even true for languages which have developed highly elaborate grammatical tense distinctions. In comparison, not only is tense not as rich a resource as lexical devices, it also tends to play a minor role in a discourse context.

In narrative, once it is established that the situations are supposed to be understood as having happened in the past, i.e. before the speech moment, past tense form is not necessary. Temporal reference takes on a different form; it depends more on reference points within the narrative, e.g. neighboring situations. The phenomenon that temporal location is determined by reference to another situation in the discourse is called temporal anaphor (Partee, 1984)

The formulaic expression *congqian* “once upon a time” is very important, especially for languages like Chinese that do not have grammatical tense. Such an expression that occurs at the very beginning of a story sets a frame for the coming story. Its function is to contextualize the whole story as anchored in a time that is before the speech moment. Combined with the generalized pattern of temporal interpretation, it not only reinforces the notion that bounded situations happened in the past and thus describe narrative events

but also overrides the prediction that unbounded situations have present time reference, because this formulaic expression at the very beginning constrains the interpretation in such a way that unbounded situations are interpreted as also having past time reference. As long as it is understood that all the situations in the story world (unless otherwise indicated) obtain before the speech moment, temporal locations can be determined by relating one situation to another.

Two tensed clauses next to each other are temporally related. They either overlap or they are in a sequence. Kamp and Reyle (1993) observed that the second of a pair of sentences describes an event that coincides with, or is in the vicinity of, the event described in the first sentence. This is a very pervasive feature of natural language, a phenomenon known as temporal anaphor. This phenomenon raises an interesting question for the interpretation of time. For example, the two events in the second sentence of

(62) Bill left the house at quarter past five. He took a taxi to the station and caught the first train to Bognor.

are naturally understood as following the one in the first sentence. A simple definition of past tense as located in the past or before the utterance moment does not capture the fact that although both the events in the second sentence and the event in the first sentence are located before the utterance time, they do not occupy the same point on the axis of time. The locations of the events in the second sentence somehow depend on the location of the first event. This is what is meant by temporal anaphor. So it seems reference time in

connected discourse does not depend absolutely on the utterance moment, but also on the event time of the previous situation. This is why aspect in the form of situation time is relevant in determining temporal locations. The most obvious case is the difference between a situation that is temporally bounded and one that is not. We will first look at (63).

(63). Bill left the house at quarter past five. He was in a dark suit. He took a taxi to the station and caught the first train to Bognor.

The situation in the second sentence in the above episode “he was in a dark suit” is true not only after “he left the house” but also true when “he took a taxi” and “caught the first train”. The situation “he took a taxi to the station” is understood to happen after “he left the house”, in that case, located after the first event. However, the situation “he was in a dark suit” obtains throughout the whole episode, and it overlaps with the time of every other situation.

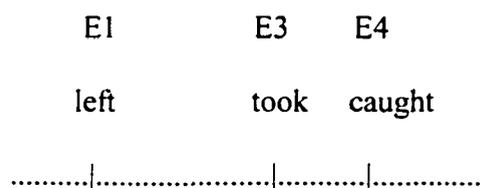
In the following episode (64), the situation “hum a tune” could be temporally bounded and thus located after the situation in the first sentence just like the two situations in the third sentence. However, when presented in the progressive aspect, “He was humming a tune” overlaps “he left the house”.

(64). Bill left the house at quarter past five. He was humming a tune from the latest hit. He took a taxi to the station and caught the first train to Bognor.

Although “he was in a dark suit” overlaps every other situation in (63), we are less sure about whether, in addition to overlapping “Bill left the house at 5:15”, “he was humming a tune” also overlaps “he took a taxi” and even less “he caught the first train”. “Humming a tune” is a different situation from “be in a dark suit”. It may well have spanned the time “he took a taxi” and “took the first train”, but pragmatic knowledge tells us that it is very unlikely. If that is the case, the situation has changed and perhaps is better expressed with “he kept humming a tune”.

Both “take a taxi to the station” and “catch a train” encode telic situations, situations with inherent endpoints and both presented in the perfective viewpoint. They are both interpreted as located after the previous event “he left the house”. In contrast, “be in a suit” is a stative situation with no inherent boundaries and “hum a tune” is telic but presented in the progressive viewpoint. They both are interpreted as overlapping with the previous event “he left the house” because they are both temporally unbounded, although they may have different spans over the discourse. The former may overlap the time of following situations, but it is unlikely for the latter.

If we use a diagram, the temporal locations of the situations in (63) can be shown visually as follows.



> E2 = in a suit <

The three events above the dotted line are coded by telic situations and presented in the perfective viewpoint. Situations presented in such a way are unanalyzed wholes. They can be regarded as discrete points on the axis of time. They are located in linear order and form a sequence. Since we know the first event “left the house” is located at quarter past five, we know that event 3 and 4 happened after quarter past five. In other words, the locations of following events in the sequence can be determined by referring back to that of the first event and thus the term temporal anaphor. How much time elapsed since the first event? This information is left out either because the speaker does not consider such information relevant or because it can be inferred from world knowledge. In contrast, the situation below the dotted line is stative and it does not have inherent boundaries and therefore it is temporally open; instead of being presented as a point, it is presented as a span that stretches along the axis. In other words, the situation “in a dark suit” is not part of the sequence. Instead it is part of the background of the episode.

In short, in narrative discourse, temporal locations can be decided by temporal anaphor. Aspect plays a role because situations with inherent boundaries or presented in the perfective viewpoint form a sequence while situations without boundaries or presented in the imperfective viewpoint temporally overlap the immediately preceding event. What is clear from the above analysis is that reference time seems not to move when the following eventuality is a temporally unbounded and only the event time of temporally bounded situations can serve as the reference point for the following events.

This is relevant to the observation that some sentences in a narrative are the backbone because they move the story ahead while some other sentences seem to be providing background information or narrator's comment on what is happening in the story world and thus do not move the story ahead, an observation that will be discussed in more detail in the next chapter.

Chapter III **TEMPORALITY AND DISCOURSE GROUNDING**

In this chapter, I will discuss the association of tense/aspect distinctions and information structure in narrative discourse and examine how information status is associated with temporality in Chinese narratives. For that purpose I will draw on Hopper's and Longacre's works for discussion of information structure in narrative. I will also conduct a qualitative study to explore the possibilities available for native speakers of Chinese to encode temporality in narrative discourse, i.e. explore what types of devices in addition to grammatical marking L1 speakers use to encode temporality.

Section One **TEMPORAL RELATIONS AND DISCOURSE GROUNDING**

The major distinction between foreground and background in narrative is considered universal. These two functions differ in the temporal relations involved. In the foreground, events form a sequence and time moves along the line of sequential development. However, in the background, time does not advance. Rather it typically overlaps the time of the immediate preceding event. In this part of the dissertation, I will describe the information structure in narrative and highlight the temporal features of clauses that contribute to the interpretation of temporal coherence in narratives. Since temporal movement is essential to narratives, I will first describe the temporal features of foreground clauses and then those of the background clauses.

The association of viewpoint aspect and discourse grounding has been the central theme of Hopper (1979, 1982). Citing cross-linguistic evidence, Hopper found that the perfective viewpoint tends to be used to present foreground events that form the backbone of a story. In contrast, imperfective viewpoint tends to be used for background

purpose. Hopper emphasized the concept of closure as the most important feature for triggering the perfective, for closure is the clause-level correlate of the sequencing function. A narrative does not simply report events but does so in an orderly way, i.e. by presenting them in a sequence. Sequencing is such an essential feature of narrative that Labov and Waletzky (1967) define narratives as a sequence of minimally two clauses presenting two consecutive events in the story world. According to Labov and Waletzky (1967), two clauses which are temporally ordered with respect to each other are said to be separated by temporal juncture. While sequencing defines narrative discourse, temporal juncture is the defining feature of such a sequence and closure is necessary to create juncture at the clause level.

Another word for closure is boundary. However, the closure of a clause can have different sources. Smith (1991) posited two components for aspect. Situations can be bounded either because they have inherent boundaries provided by their situation semantics or because such situations are presented in certain viewpoint aspect which views them with boundaries. Similarly, situations may lack inherent boundaries according to their situation semantics or be presented in a certain viewpoint in which the boundaries become irrelevant.

For two situations to be separated by temporal juncture, i.e., be temporally ordered to each other, they both have to be bounded somehow. A situation by its situational semantics (for example being [+telic]) can satisfy this requirement, as can the perfective viewpoint, which presents situations as wholes and thus bounded. In contrast, [-telic]

situations generally do not move reference time. Neither do situations presented in the imperfective.

A third source is the lexicon, in particular temporal adverbials. Since lexical means of expressing temporality are richer than grammatical means, even for languages that have developed sophisticated grammatical tense/aspect distinctions, the use of temporal adverbials can always put situations in order. For example, *ranhou* "afterwards" is a conjunction in Chinese that clearly indicates temporal sequence, regardless whether the situations connected by it have closure (or are bounded) or not. In English, "then" serves the same function. The third clause in the following episode expresses a state, and according to Smith (1991), states cannot be presented in perfective in English. So the situation referred to by the clause is unbounded.

(65) We received a call from her and had everything ready as she instructed. And then she was sick. And it was not until a week later that she finally made the trip.

However, it is clear that the situation "she was sick" is on the story line, because it is located after the first event of "we had everything ready" and the adverb "then" explicitly places it as after the previous situation, which is bounded. Not only "then" explicitly locates "she was sick" after "we had everything ready", it also forces the interpretation "then she got sick", shifting a stative situation into an achievement, which is bounded, and thus forms a minimal sequence.

The final source of closure comes from the discourse context and is pragmatic in nature. Here is a similar example in Chinese.

(66) *women chifan, changge, ranhou qu le dianyingyuan.*

we eat sing and then go LE cinema

We had food, did some singing and then went for a movie.

Both of the two situations *chifan* “to eat” and *changge* “to sing” are activities and therefore have no inherent terminal endpoints. Both are presented in the neutral viewpoint. However, they are interpreted as foreground events, just like the third one. The adverb preceding the third clause *ranhou* explicitly indicates that they are bounded. Otherwise, they cannot serve as the reference point for the third situation. In such a case, the terminal endpoints of both activities are arbitrarily supplied, filled in by our pragmatic knowledge or the discourse context.

Even without the conjunction *ranhou*, the above example would still be very likely to be interpreted as if events happened in the order they were presented. The principle of manner proposed by Grice (Levinson 1983) states that “be orderly” would still work in such a way that the order in which situations are presented reflects the order they took place in the story world. This is known as the Natural Order Principle (Dietrich et al 1995).

In contrast to foreground where events form a sequence, in the background of a story, situations do not follow each other in such an orderly manner but rather overlap each

other. Time typically does not move forward. Instead, it is either simultaneous with some time previously mentioned or overlaps with it, the degree to which depends oftentimes on the context and pragmatic knowledge. If foreground is defined by temporal sequence, the background is defined by temporal overlap, a general word for both simultaneity and overlap.

Rank Scheme of Narrative

Foreground is thus characterized by sequence of events while background is characterized by non-sequential events or state of affairs. Since background consists of both states and events, we need finer distinctions in background to capture such differences. For finer distinctions, we turn to Longacre's (1989) ranking scheme.

Not only is information in narrative discourse important for the story in different degrees, there are also different morpho-syntactic features to encode the information status. This is the theme of Longacre (1989), in which he proposed two cross-linguistic hypotheses about discourse generation and discourse analysis, stating that any type of discourse has a main line of development, in the case of narrative, a storyline, and other supporting elements that depart from the main line in some degree. These supporting elements include all the non-narrative elements. Such distinction has implications for local intersentential relationship in that the sentences or clauses are characterized by different degrees of parameter setting (such as transitivity parameter proposed by Hopper and Thompson 1980) that correspond to the ranking of information. Longacre (1989, 416) posited a gradient structure of narrative. I will first present his scheme and by doing

Band 7	Script determined
Cohesive band (verbs in preposed/ Postposed adverbial clauses)	Repetitive Back Reference

The first band is the first order foreground clauses, called storyline. In English, such clauses typically take the form of past actions by an animate agent and rank high on the transitivity scale proposed by Hopper and Thompson (1980). For example, the three clauses in Chapter II, Section Three:

(67) Bill left the house at quarter past five. He took a taxi to the station and caught the first train to Bognor.

The situations described by the three consecutive clauses are achievement, accomplishment and achievement, respectively. They are all telic situations, and they are all presented in the perfective viewpoint, which presents them as bounded temporally.

As progression goes from clauses of the higher rank to those of the lower rank, the content they encode is further away from the story line. Band 2 clauses, which are called background, typically do not move the story forward, but rather the activities that accompany the storyline events. For example, the second clause in (68) “he was humming a tune” describes an activity that was going on when Bill left his house. Band 2 clauses typically take the form of past progressive or past states.

(68) Bill left the house at quarter past five. He was humming a tune from the latest hit. He took a taxi to the station and caught the first train to Bognor.

The situation described in clause 2 is an activity (hum a tune) which is atelic, and it is presented in the imperfective viewpoint, which focuses on a subinterval of the situation without reference to its boundaries. Therefore, it is temporally unbounded.

In Band 3 are found clauses that are called flashback. Situations described by these clauses are indeed on the storyline. However, they are presented in such a way that they are out of sequence. For example, the last clause in the following episode (69) describes an event that happened before Bill left the house. However, the order in which it is presented with respect to other events does not reflect that of the events that happened in the story world. It is like an afterthought and very likely serves as an explanation that later on in the story Bill was picked up by someone named Frank. Therefore, the event of “calling Frank” is further away from the storyline. Clauses in this band usually are in the form of pluperfect. Sometimes an adverb such as “previously” helps to clearly indicate the temporal locations involved.

(69) Bill left the house at quarter past five. He took a taxi to the station and caught the first train to Bognor, where he was greeted by Frank. He had called Frank previously to pick him up at the station.

Regardless of the temporal features of the situation described by the last clause in (69), the way it is presented makes it temporally unbounded. The pluperfect presents a situation "call Frank" in the past with reference to the point when Bill was greeted by Frank at the station, which is itself in the past. The situation is mentioned incidentally and considered to be relevant only to the time "he was greeted by Frank" at the station. The fact that Bill had called Frank previously was still a fact by the time he was greeted by Frank. Instead of following the time of Bill being greeted by Frank, the time of his having called Frank overlaps it. Therefore, the last clause does not advance time.

Clauses in Band 4 as the name suggests set up the setting for the storyline events. For example, the second clause in episode (70) describes the setting against which the events of taking a taxi and catching the train took place. Clauses of this band normally express stative situations and take the form of stative verbs such as "be" verbs. Stative situations are of course unbounded temporally.

(70) Bill left the house at quarter past five. It was a pleasant morning in the early spring. He took a taxi to the station and caught the first train to Bognor.

Clauses in Band 5 are called irrealis. They either contain negative forms and modals or are in the future tense. Situations that did not happen or do not obtain are not part of the story world which is to be recaptured by the narrative. Therefore, they are even further away from the storyline. The same is true with modals and future tense. Modals express possibility, desire, obligation, which are not eventualities. Future locates events

which have not happened yet. Neither of these structures belongs to the world of reality. For example, the second clause in episode (71) describes an event that did not materialize and therefore is away from the storyline.

(71) Bill left the house at quarter past five. He did not bother to wake up his wife.
He took a taxi to the station and caught the first train to Bognor.

In terms of temporality, a situation that is in the form of negative clause or future tense is stative and therefore is temporally unbounded. To future tense and negatives can also be added conditional clauses.

Band 6 clauses do not describe so much the events in the story world but rather the narrator's viewpoint of or his interpretation of those situations. In this sense, Band 6 clauses draw attention to the narrating world instead of the narrated world. They could thus be further away from the storyline. For example, the second clause in episode (72) presents Bill as in a good mood. However, Bill's being in a good mood is not so much a part of the story if it had not been for the narrator who ascribes to him the mood. Such a description is the result of narrator's intrusion into the story. Band 6 clauses can take the form of past tense or gnomic present. Band 6 clauses are hard to distinguish from Band 4 clauses if the narrator's stance is not readily detectable. Usually narrator's voice can be detected in such linguistic forms as "seems", "seemingly", "as I can tell", and so forth. They typically express knowledge or belief (Smith 2000).

(72) Bill left the house at quarter past five. He seemed to be in a good mood. He took a taxi to the station and caught the first train to Bognor.

Temporally, that Bill was seemingly in a good mood overlaps the time when he left the house. Therefore, the second clause does not move the story ahead.

Band 7 clauses serve the function of coherence. They are like the cohesive elements in a story that help to make the story a whole. Longacre (1989) characterized them as the “connective tissue” of a story in contrast to the content. It is in this sense that they are not on the storyline. Very often, a Band 7 clause takes the form of preposed adverbial clause. For example, the subordinate clause introduced by “as soon as” in the following episode (73) describes an event that refers back to the event in the first clause. “Walk out of the doorway” is almost a synonym of “leave the house”. The adverbial clause does not introduce a new event (with a new time) into the story but rather serves to locate the next foreground event encoded in the main clause by referring back to the first foreground event in the episode.

(73) Bill left the house at quarter past five. As soon as he walked out of the doorway, he caught a taxi. He took the taxi to the station and caught the first train to Bognor.

Regardless of the temporal features of the situation of Bill's walking out of the doorway, it does not follow the time of the previous narrative event described in the preceding clause, and therefore it does not advance narrative time.

There are times when what is referred back to is not explicitly encoded but rather presupposed because of a certain script invoked. In episode (74), the same adverbial clause refers back to the event of Bill leaving the house, which is not explicitly stated. However, the script of leaving one's house to catch a train enables one to interpret the episode in such a way that the event of his leaving the house is implied. So although apparently walking out of the doorway is on the storyline because it is never asserted that Bill left the house, it is presented not as a new event but as part of background which is activated once the script is invoked.

(74) Bill checked the gas and turned out all the lights. As soon as he walked out of the doorway, he caught a taxi. He took the taxi to the station and caught the first train to Bognor.

While Band 2 through Band 7 clauses differ in the degree they are away from the storyline, they all serve the general background function and are united in the way that their time overlaps that of the previous foreground event and they do not advance narrative time. In order to avoid confusion that might be caused by the use of the word "background", in this dissertation, background is understood as a cover term for all the

clauses not in the foreground. It constitutes the supporting elements of a narrative.

Background in Longacre's scheme is always referred to as Band 2 background.

Promotion and Demotion in the Rank Scheme

The above scheme features the association of narrative structure and morpho-syntactic structure. Although certain morpho-syntactic feature with certain tense/aspect distinction correlates with certain information status, the match between the two is not a perfect one-to-one correspondence. Mobility up and down the scale is possible and is actually constantly taken advantage of. On the one hand, clauses from Band 2 to 5 can be promoted to the status of Band 1 by the use of adverbs such as "suddenly" (Longacre 1989, 420). On the other hand, clauses from Band 1 can also be demoted. Taken out of sequence, they are demoted to the Band 3. And at least in Chinese Band 1 can be demoted to Band 3 by the use of adverbs such as *xianqian* "earlier", *zuichu* "originally" without explicitly using the pluperfect, which is unavailable in Chinese. Appearing in the orientation part of a narrative, Band 1 clauses can also be demoted to Band 4 when the action or event sequence is understood to be habitual or expository of a procedure. They can even be demoted all the way down to Band 7, for example when the event "the phone rang" is presented in an adverbial clause "he was in the shower when the phone rang". In this case, the storyline event is demoted to the status of Band 7. However, Longacre (1989) did not offer an explanation of why the demoted clause still seems to be in the foreground.

The possibility of promotion and demotion in the scheme shows that the correlation of grammatical structure and information structure in narrative is not perfect. A structure

normally associated with a particular rank member of the scheme can be used to present a situation of a different rank which accordingly encodes different grounding. Although such hopping across the ranks is usually signaled by explicit temporal expression such as by the use of adverbs, explicit signaling is not necessary, in the case of Band 1 being demoted to Band 4, it seems the knowledge that the events described in a sequence are in the orientation part of the story is sufficient to get the clauses demoted. It seems that knowledge of the macrostructure of a story can override local surface structure. Band 1 clauses can also be demoted to Band 3 without explicit use of adverbs. How this scheme can be applied to Chinese is explained in the next section.

Rank Scheme in Chinese Narrative

The above discourse grounding hierarchy shows morpho-syntactic correlation. Such correlation is manifested in English primarily through verb inflections that encode temporal contrast (e.g. perfective vs. imperfective), sometimes with the help of adverbial expressions (e.g. previously for Band 3 clauses), and sometimes even relying solely on the situational semantics (e.g. stative situations, arguably in neutral viewpoint for Band 4 clauses). Depending on the morpho-syntactic repertoire a language has, differences in the way the hierarchy is manifested linguistically are expected across languages. In this section, I will explore the applicability of this scheme to Chinese, paying special attention to the morpho-syntactic features associated with the ranking.

If perfective viewpoint functions as its core to sequence events in chronological order, as Hopper (1979, 1982) suggested, we can hypothesize the picture must be different for Chinese, where the perfective viewpoint marker is optional, and indeed this is the case.

Christensen (1994) found that in the Chinese version of the Pear Stories, clauses presented in the perfective *le* account for only a small portion of foreground clauses. Instead, situations expressed by resultative complements without the perfective *le* is the most frequently used form of foregrounding. Smith and Erbaugh (2000) found that, generally speaking, viewpoint markers such as *le*, *guo*, *zai* and *zhe* in Chinese news reporting are rare. What is commonly found in narratives in Chinese are telic situations presented in the neutral viewpoint. Therefore, in Chinese the foregrounding function is primarily associated with situation types and to a lesser extent with viewpoint aspect. To illustrate such association in Chinese, all the examples below are taken from the Pear Stories collected by Erbaugh (1990). The number preceding each meaning unit is the serial number assigned to it in the original transcription. The devices serving to indicate grounding are in boldface print.

Band 1 Story Line

(75) past action

4.2 *ranhou tou le yi lou bale*

and then steal **LE** one basket pear

He then took away a basket of pears. (Narrative A)

(76) past motion

7.2 *chezi jiu dao le.*

Bike then FALL **LE**

The bike then fell off. (Narrative A)

(77) past cognitive event

18.1 *jieguo fajue ...*

as a result find ...

As a result he found that ... (Narrative A)

(78) past contingency

19.1 *jiu haoxing hen yihuo de kan zhe tamen.*

Then seem very confused DE look ZHE them

He **then** looked at them confusedly. (Narrative A)

Since tense is not grammatically encoded, past tense interpretation is either indicated by adverbial expressions or depends on the way situations are typically interpreted (Smith 2000). Bounded situations are by default interpreted as having past tense. The first three situations are thus all understood to have past time reference, but this can be overridden by the use of adverbial expressions or the existence of certain contextual information.

Band 2 Background Activities

(79) past progressive

5.1 *you ge nongfu zai shouhuo ya.*

Exist CL farmer **ZAI** harvet

A farmer is harvesting. (Narrative I)

5.2 *jiu you ge ren qian yi ge dongwu zou guo*

then exist CL man lead one CL animal walk by

Then a man went by leading an animal

(80) past state

23.2 *jiu ting xialai.*

Then stop down

He then stopped

24.2 *dagai xiangyao nei ge fanshiliu.*

Perhaps **want** that CL pear

Perhaps he **wanted** those pears. (Narrative L)

Again, past tense is not grammatically marked in Chinese. Once it is established at the beginning that what is being told is a story, a frame of temporal reference is established; the default temporal location is past. Example (79) from Narrative I is in the progressive, describing the accompanying event (unbounded situation) of the main event which comes later in 5.2. In example (80), the situation in 24.2 of Narrative L refers to the cognitive state (unbounded situation) the boy was in when he decided to stop.

Band 3 Flashback

(81) adverbs *yijing* instead of Pluperfect

11.1 *huala nei ge maozi chui dao dishang le.*

Huala that CL hat blow to ground LE

Suddenly his hat was blown off to the ground.

12.1 *tamen yijing hui guo tou...zou le.*

They **already** turn around...leave LE

The three boys have **already** left/are **already** on their way. (Narrative A)

English uses pluperfect to present events out of narrative sequence. However, Chinese uses adverbs such as *jijing* “already” or depends on the context in the absence of such adverbials. The event of their turning around and leaving referred to in sentence 12.1 of the above example (81) by Narrative A are out of sequence, because they should have happened before the event described in 11.1, namely suddenly the hat was blown off. The situations *hui guo tou* “to turn around” *zou* “to leave” are both telic and bounded temporally. The particle *le* encodes perfectivity. However, the presence of the adverb *yijing* “already” shifts focus on the state that obtains naturally as a result of the completion of the telic situation. A state is unbounded and is durative. The state that “they are already gone and on their way” is already holding when the event in 11.1 took place. Therefore, clause 12.1 does not move narrative time.

Band 4 Setting

(82) BE verbs and other stative verbs

5.2 *yi lou shi kong de,*

one basket is empty DE

One basket **was** empty. (Narrative M)

(83) adjective predicates

9.1 *zhexie shuye zai zhei ge jinse yangguang zhi xia shangguang,*

these leaves ZAI this CL golden sun DE under glitter

These leaves were glittering under the golden Sun.

9.2 *hen haokan*.

very beautiful

it was very beautiful. (Narrative E)

Like Band 4 clauses in English, Band 4 clauses in Chinese also take the form of stative verbs, “be” and adjective predicates. All of them are temporally unbounded. None of them advances narrative time.

Band 5 Irrealis

(84) negative

46.2 *ta meiyou zai qi shangqu*.

He **not** again ride onto

This time he did **not** ride the bike. (Narrative G)

(85) future/modal

58.6 *suoyi zhe shihou biran hui jingguo nei ke shu*.

So this moment definitely **will** pass that CL tree

So this time he **would** certainly pass by that tree. (Narrative E)

The negative form in (84) from Narrative G expresses something that did not happen and as a result does not belong in the story world whose events are being recounted.

Clause 58.6 in (85) from Narrative E predicts that three boys would pass by the tree where the man had been picking pears, a projected event, not part of the story world either. Neither does an event that failed to happen nor does one that is projected to happen in the future advance the story.

Band 6 Evaluation

(86) unbounded situations implicitly in the Past tense

6.1 *ta zhai de hen xingku,*

he pick DE very **hard**

He worked really **hard**.

6.2 *pa de hen gao.*

Climb DE very **high**

He climbed very **high**. (Narrative J)

(87) adverbs indicating gnomic present

20.2 *xiang women yiban tingche,*

like us **normally** park

Usually when we park a bike,

20.3 *jiushu ba neige chezi zheyang zhan wen zai na 'r.*

just BA that bike this way stand steady at there

We just make the bike stand steady, like this, over there. (Narrative F)

Chinese uses general past and gnomic present as English does to encode evaluation, except that past tense is inferred from the context, and that gnomic present is indicated by such adverbs as *yiban* “normally”. The situations encoded in 6.1 and 6.2 of (86) from Narrative J are stative and temporally unbounded. That in 20.2 of (87) from Narrative F is habitual and temporally unbounded too.

Band 7 Cohesive Band

(88) back reference

9.1 *ranhou pangbian you san ge xiao nanhai jiu bang ta jian bale.*

Afterwards side exist three CL little boy then help him pick up pears

Then three boys started to help him pick up the pears.

10.1 *ranhou nage ... ta jiu ba..jian hao yihou.*

then that he then BA..pick up ready **after**

When they finished picking up the pears from the ground,

10.2 *ta jiu tui chezi zou.*

He then push bike walk

He then started walking his bike. (Narrative A)

(89) script-determined

52.4 *zheige shihou huran kandao malu zhongjian,*

this moment suddenly see road middle

At this moment he suddenly saw in the middle of the road

52.5 *neige xiao haizi gangcai dai zhe yi ding maozi diao zai lu de zhongjian.*

that little child just now wear ZHE one CLF hat fall Loc road ASS middle
the hat the boy was wearing was on the ground.

53.1 *suoyi ta jian qi zheige maozi yihou,*

so he pick up this hat **after**

So **after** he picked up the hat,

53.2 *zhuan guo shen lai, ...*

turn around body

he turned around,

.....

54.3 *ba zhei maozi gei ta.*

BA this hat give him. (Narrative E)

gave him the hat.

As in English, Chinese uses preposed adverbial temporal clauses for cohesive purpose. Clause 10.1 in (88) from Narrative A specifically refers to the previous event in 9.1 “three boys then helped him pick up the pears” and locates the following event encoded in the main clause 10.2 “he then started walking the bike” as “after the pears were all put back in the basket”. Clause 53.1 in (89) from Narrative E refers back to an event not explicitly stated but invoked by virtue of a script, because “after he picked up the hat” presupposes that he did pick up the hat and the hat could not have been returned unless it had been picked up from the ground in the first place. Since they only repeat or refer back to some events that have already been reported or presupposed, regardless of whether the

events are bounded, they do not introduce new time and therefore do not move narrative time.

Some grammatical structures left out by Longacre (1989) deserve further attention, such as cleft sentences. Cleft sentences in English belong to Band 4, because it is not the event but rather the place, the manner of the action, or the actor (agent and patient) that is the focus. Cleft sentences are easy to identify if they have the distinctive syntactic structure “it is ... that ...”. Chinese has a similar syntactic structure *shi ... de*. However, in speech, the same emphasis associated with the focus is achieved by extra stress and they are not easy to identify in transcription. Similarly, clauses that express contrast do not necessarily take distinctive forms but materialize in contrastive stress pattern. When speech is transcribed without notations on stress pattern, the meaning could be distorted in that a Band 4 clause could be misinterpreted.

After morpho-syntactic differences of Chinese are taken into consideration, Longacre’s (1989) rank scheme is applicable to Chinese.

Section Two INTERPRETATION OF TEMPORALITY IN CHINESE NARRATIVE

In this section I will explore the possibilities available for native speakers of Chinese to encode temporality in narrative discourse. The goal of such a qualitative study would be to explore what types of encoding in addition to grammatical marking L1 speakers use to encode temporality. Such a study is motivated by the following considerations.

First, for language specific purpose, such qualitative study answers the question of how information structure is established in Chinese.

Second, such a study has implications for the typology of temporality. Since information structures proposed by Hopper (1982) and Longacre (1989) are universal and yet languages differ in structure, to explore different means of temporal encoding can shed light on typological differences. For example, languages like English rely primarily on grammatical tense/aspect distinctions in encoding temporality. Chinese only possesses a quasi-grammatical aspectual system and relies marginally on viewpoint aspect to signal grounding. Instead, temporal adverbial expressions are used more frequently. There are even languages which do not resort to such grammatical tense/aspect distinction, nor to temporal adverbials, but instead almost entirely to the pragmatic nature of discourse organization to achieve temporal coherence.

Third, such qualitative study has implications for second language research. Since there are languages that do not rely on grammatical tense/aspect categories to encode temporality, it is possible that interlanguages, linguistic systems in their own right, would exhibit the same pattern. Therefore, second language study focusing on tense and aspectual morphemes can benefit from such studies, because they show that failure to supply a grammatical form does not necessarily indicate lack of competence in temporal encoding. Just as there are languages that rely to a lesser extent on grammatical morphemes to encode temporality, L2 learners at certain developmental stages prefer certain types of devices other than grammatical ones. Contrary to the popular belief that they do not have competence in expressing this function, the fact that L2 learners choose to use certain types of devices over other types shows that they have such competence. For one thing, to equate competence in temporality with the use of grammatical

morphemes is too narrow. While it is useful to study the use of grammatical morphemes by learners, the kind of qualitative study that will be presented in this section would still prove useful because it could point to potential cross-linguistic L1 differences in encoding of temporality and help to explain learners' behavior in terms of possible L1 transfer.

Since foreground and background are distinguished by different temporal relations involved, I will first discuss interpretation of temporality in foreground and then in the background.

Temporal Advancement

As has been shown in the previous section, foreground is characterized by temporal advancement in sequence. To achieve temporal movement, Chinese is equipped with a range of devices from different sources, including grammatical (e.g. aspectual particles), lexical (e.g. situation types), discourse (e.g. conjunctions), and pragmatic (e.g. contextual information), and afforded various possibilities as a result of their combinations.

Perfective Viewpoint

Situations presented in the perfective viewpoint are bounded and can advance time, regardless of situation types (arguably perfective viewpoint is available to stative situations as well as non-stative situations). Adverbials expressing temporal sequence may occur but not necessarily. Again, examples are taken from the Pear Stories collected by Erbaugh (1990). The number preceding each meaning unit is the serial number assigned to it in the original transcription. The devices serving to indicate grounding are in boldface print.

(a) telic situations in perfective viewpoint

(90)

21.2 *ta na le san ge shuiguo,*he take **LE** three CL fruit

He took out three pears,

21.3 *jiao gei le zhei san ge haizi.*give to **LE** these three CL children

and gave them to the three boys. (Narrative N)

(b) atelic situations in perfective viewpoint

(91)

19.4 *zheige xiao haizi you kan le neige nu haizi,*this little boy again look **LE** that girl

The boy then looked at the girl. (Narrative O)

(c) stative situation in perfective

(92)

17.1 *ranhou,*

afterwards,

then

17.2 *bu xiaoxin le,*

not careful **LE**

lost attention

17.3 *zhuang dao shitou.*

bump to rock

and bumped onto a rock. (Narrative M)

Neutral Viewpoint

Whether situations presented in the neutral viewpoint can move time depends on whether they have boundaries, or are telic. Telic situations can without the help of adverbials. For unbounded situations (atelic and states), adverbials are needed, or in the absence of such adverbials, contextual information is necessary.

(a) telic situations in neutral viewpoint

(93)

54.1 *qi che de xiao hai ting xialai,*

ride bike DE little boy stop down

The boy riding the bike stopped. (Narrative E)

(b) atelic situations (activities) in neutral viewpoint

(94) With adverbials

38.1 *yushi,*

thereupon

then

38.2 *yige ren shou li na yige guozi,*

each person hand in hold one fruit,

each person with a pear in hand,

38.3 *jiu wang nongren de neige fangxiang zou.*

then toward farmer DE that direction walk

Then started walking towards that farmer. (Narrative D)

(95) without adverbials

58.1 *name yi kan,*

then one look

so he took a look,

58.2 *shu yi shu,*

count once count

and counted,

58.4 *shao le yi lan.*

short LE one basket

one basket was missing.

59.1 *ta juede hen qiguai.*

he feel very strange

He then felt very strange. (Narrative G)

(c) stative situations in neutral viewpoint

(96) with adverbials

20.2 *neige nan hai jiu hen kanji.*

that boy **then** very grateful

That boy was very grateful then.

21.1 *jiu song le ta sange shuiguo.*

then give LE him three fruit

And then gave them three pears. (Narrative T)

(97) without adverbials

21.2 *ta na le sange shuiguo,*

he take LE three fruit

He took out three pears,

21.3 *jiao gei le zhei sange haizi.*

give to LE these three boys

and gave them to the three boys.

22.1 *zhei sange haizi hen gaoxing*

these three boys very happy

So these three boys were very pleased.

22.2 *yibian chi zhe jiu zou guo qu.*

while eat ZHE then walk over

So they walked toward the tree while eating pears. (Narrative N)

Imperfective Viewpoint

Situations that are presented in the imperfective viewpoint, assuming the viewpoint is available, need adverbials or contextual information in the absence of adverbials to appear in the foreground.

(98) with adverbials

30.2 *ta jiu yong hen huaiyi de yanguang kan zhe nei sange nan hai.*

he **then** with very suspicious DE eye look **ZHE** those three boy

He then looked at those three boys very suspiciously. (Narrative T)

(99) without adverbials

33.1 *yi ren yige bale*

one person one pear

Each with a pear,

34.1 *tamen zai chi bale, yimian zou yimian chi.*

they **ZAI** eat pear, while walk while eat.

they were eating the pears while walking. (Narrative J)

If we adopt Peterson's (1992) categorization, the way situations can be presented in foreground falls into two major groups. One is by means of explicit marking and the other by means of implicit marking. Explicit marking includes such means as perfective viewpoint markers and temporal adverbial expressions that indicate temporal juncture. Implicit marking includes, in the absence of explicit encoding, such means as situational

semantics that are consistent with boundedness, or pragmatic knowledge when boundedness can not be deduced from situational semantics.

Temporal Overlap or Simultaneity

Imperfective Viewpoint

Situations presented in the imperfective viewpoint (when such viewpoint is available to the situations) are unbounded and do not move narrative time. Adverbs such as *zongshi* “always” focusing the process and implying unboundedness may occur but not necessarily.

(a) activities in imperfective

(100)

8.2 *jiushi you yige ren ao,*

just exist one person

It's just that a person

8.3 *zai zhai bale.*

ZAI pick pear

was **pick**ing pears. (Narrative B)

(101)

20.2 *cong neibian guo lai yige xiao haizi,*

from that side over come one little child

A child came by from over there,

20.3 *qi zhe yiliang jiaotache,*

ride **ZHE** one bike

riding a bike. (Narrative E)

(b) accomplishments in imperfective

(102)

8.1 *ta xianzai zai zhai di san lou bale.*

he now **ZAI** pick the third basket pear

He was now picking pears to fill the third basket. (Narrative J)

(103)

60.3 *hai na zhe tade neige shuiguo zai kou limian yi zhi chi zhe chi.*

Also hold **ZHE** his that fruit at mouth in **keep** eat **ZHE** eat

(they) also had his pears and were eating them **all the time**. (Narrative G)

(c) states in imperfective

(104)

10.1 *neige ren zai shushang mang zhe gongzuo,*

that person Loc tree on busy **ZHE** work

That person was busy working in the tree,

10.2 *suoyi,*

so,

10.3 *zheige xiao hai jiu...*

this little boy then

this boy then... (Narrative D)

Neutral Viewpoint

Whether situations presented in the neutral viewpoint encode overlap or simultaneity depends on their boundary features. Atelic situations (activities) and states can express overlap or simultaneity without the use of adverbials. For telic situations (accomplishments and achievements), adverbials expressing overlap are needed. In the absence of such adverbial expressions, one has to resort to pragmatic knowledge. For example, when bounded situations appear in the part of orientation of a story, they are understood to be expository or help to set the scene and therefore they are considered not to move time. Telic situations may also occur with focus on their resultative states.

(a) Atelic situations in neutral viewpoint

(105) activities

2.2 *you yige nongren zai lubian de yi ke shu shang...uh,*

exist one farmer Loc roadside DE one CL tree on ...

A farmer was in a tree on the roadside

2.3 *zhai guozi.*

pick fruit

picking pears. (Narrative D)

(106) states

12.1 *tade dongzuo feichang huanman,*

his movement very slow

His movement was very slow. (Narrative E)

(b) Telic situations with adverbials

(107) accomplishments

42.2 *ta zai wang qian zou liang bu de shihou,*

he then toward front walk two step DE time

When he took a few steps ahead,

42.4 *you yige da haizi ta faxian....*

exist one big boy he find

an older boy found... (Narrative G)

(108) achievements

6.1 *zou dao lushang de shihou,*

walk to road on DE time

When he hit on the road,

6.2 *cashenerguo yige nuhai,*

pass by one girl

he came across a girl. (Narrative A)

(c) Telic situations without adverbials (or with adverbials expressing sequence)

(109)

10.1 *na ta jiu zhai yi zhai,*

so he then pick one pick

So he then went about picking.

10.2 *tade daizi man le,*

his pocket full LE

When his pocket was full,

10.3 *ta jiu xialai ba daizi limian de bale fang dao louzi limina qu.*

he then come down BA pocket in DE pear put to basket in to

he would then come down the tree and put all the pears into the basket.

(Narrative B)

Perfective Viewpoint

Situations that are presented in the perfective viewpoint, with the loss of stress and intonation in written form, need adverbial expression to appear in the background, or other overt marking to do so. An example is the so-called double *le* construction where the perfect *le* at the end of sentence expresses currently relevant state. Or one has to rely on contextual knowledge.

(110) with adverbs

45.1 *neige xiaohai yijing xian zou le liang bu.*

that boy **already first** walk **LE** two step

That boy had already left. (Narrative G)

(111) double *le*

4.7 *ta zhai le liang lou le.*

he pick **LE** two basket **LE**

He had already picked two baskets of pears. (Narrative M)

(112) without overt encoding

34.3 *neige xiao hai jiu bo zhe jiao...die dao le ma,*

that little child then lame ZHE foot...fall down LE

That boy then limped...because he had fallen previously, (Narrative S)

In clause 45.1 of (110) from Narrative G, *yijing* "already" clearly indicates that a situation has been completed but shifts the focus to the state that obtains as a result of the situation and thus fails to move the story line. The double *le* in 4.7 of (111) from Narrative M has the same function. However, such overt encoding is not necessary. The situation referred to by the second clause in 34.3 of (112) from Narrative S is in the perfective viewpoint. Although it does not have any overt marking, it is still unmistakably in the background. The event of his falling off the bike has been mentioned in the previous part of the story and is now part of the background assumption by the time of his limping. In this case, it is contextual information that puts it in the background.

To put these phenomena in Peterson's categories, imperfective viewpoint markers and adverbials are explicit means of indicating temporal overlap/simultaneity, while implicit marking includes situational features of unboundedness and contextual information or knowledge of discourse structure when unboundedness is not available from situational semantics.

Chapter IV **INVENTORY OF TEMPORALITY ENCODING DEVICES**

Lacking grammatical categories of tense and aspect, grounding in Chinese is found not to be only correlated with viewpoint aspect. Instead, information status in Chinese narratives is associated with at least the following factors: particles that resemble grammatical viewpoint markers functionally, temporal expressions such as those that refer to the location, duration, frequency of a situation, semantics of clauses that realize a situation, and contextual information. The first two are categorized as explicit means of temporal encoding and the last two as implicit means of temporal encoding. In terms of the nature of meaning encoded, the first three are in the semantics: the first is about the meaning of grammatical morphemes, the second about the lexical meanings of temporal adverbials, and the third about the composite meaning of a clause of a particular situation type. However, the fourth is pragmatic in nature, because it concerns inference about temporality based on knowledge of the discourse context. In the previous chapter, I presented a qualitative analysis of the encoding of temporality in Chinese narrative, exploring the possibilities of using different kinds of devices to encode temporal advancement and simultaneity. In this chapter, I will conduct a quantitative study of temporality. The goal of the quantitative study is to establish an inventory of such devices and the frequency of their use by native speakers of Chinese and by adult learners. The results will answer the first three of the four research questions set for this study. For those purposes, I will use the Pear Story narratives told by 20 native speakers of Chinese and 21 English-speaking learners in the data set.

Section One. QUANTITATIVE STUDY OF ENCODING OF TEMPORALITY BY L1

The goal of this segment of research is to establish an inventory of devices L1 speakers use to encode temporality in discourse. I will examine with this repertoire how often L1 speakers resort to each type or combination of types in encoding temporality. The pattern of use of these devices by L2 learners can be found by a similar quantitative study for L2 learners, which is presented in Section Two. More attention will be given to foreground than background, because foreground, as Longacre (1989) argued, is the substantive part of a story while background is the supportive part.

Coding

Coding is based on the unit of clause. The following rules are followed in the coding process.

(a) When the idea unit is a nominal phrase, an adverb, or a preposition, it is left uncoded for temporality, unless it is the predicate of a clause, in which case it is coded as stative situation.

(b) Although expressions such as *kan qilai* "looks like" contain verbs and *haoxing* "seems" can be also used as a verb, they are set phrases that express the speaker's belief or commitment to the statement they are making, and therefore, they are not coded for temporal features. Rather they are treated as part of modality. In addition, *wo kan* "I see, I believe", *wo xiang* "I think, I believe", according to *Zhongguo Yuwen* (1985/6), is part of modality.

(c) Clausal objects of verbs such as *kanjian* "to see", *xiang* "to want", *zhidao* "to know" are not coded unless they constitute idea units themselves.

(d) Serial verb constructions such as the following are coded as single clauses.

Bang "to help"

(113) *Bang ta ba chezi fu qilai.*

help him BA bike support up

Help him pick up the bike.

Rang "to make, to cause"

(114) *Rang ren juede xinli hen shufu.*

make one feel heart very comfortable

Making one feel very comfortable at heart.

Modal verbs such as *yao* "want, will", *hui* "will"

(115) *Hui jingguo neike shu.*

will pass by that tree

He will pass by that tree.

(e) The existential construction (verb *you* plus the nominal phrase introduced by it) is not coded. *You* "to exist" is not coded separately in serial verb constructions such as

(116) *You yige xiao haizi cong neibian guolai.*

exist a little child from that side come over

A child came over from there.

(f) For the purpose of studying aspectual markers, the clause containing *zhe* which arguably serves as manner adverbial in a serial verb construction (Chu 1998) is coded for its temporal features and for grounding.

(117) *Ta jiu qi zhe chezi zou le.*

he then ride **ZHE** bike leave LE

He then left riding the bike.

(g) However, serial verb constructions such as the following are coded as separate clauses.

(118) *Chezi (peng dao yikuai da shitou shang) (shuai xialai).*

bike bump to one big rock on fall down

The bike hit on a rock and fell.

(h) It could be argued that relative clauses belong to Band 4 for expository purposes. However, in this study, relative clauses are not coded.

Each clause identified according to the above-said rules was coded for four parameters: grounding, situational semantic features, grammatical marking, and discourse marking. The coding was then checked by an independent native speaker of Chinese. Disagreements in coding were resolved when they arose.

Grounding/Framing

F	Foreground clause
B2, B3, B4, B5, B6, B7	Band 2 through Band 7 clauses
P	Framing

Examples of F(B1) through B7 have been given in Chapter III. The following is a discussion of what is coded as P(Framing). A clause coded as P is not part of the story being told. Rather, it helps to frame the story-telling as a speech event. For example, a narrator typically ends a story told in English with “this is it”, which means the story comes to an end at this point. It announces the completion of the story-telling event, but it does not contribute to the content of the story which is being told. Framing can occur in another form, i.e. in the perspective the story-teller takes toward the events he/she is recounting. For example, Tannen (1980) found that movie-savvy American college students recounting movie stories frequently refer to the viewing experience by framing the story as part of a viewing experience. Some L1 Chinese speakers also used this kind of framing.

(119)

38.1 *keshi, turan zheige shihou,*

but, suddenly this moment

But suddenly at this moment,

38.2 *cong yuan jingtou biancheng jin jingtou,*

from far lens become near lens

it turns from long shot to near shot, (Narrative E)

Situational Semantic Features

Each clause is coded for three temporal features: [stativity], [telicity], and [durativity]. Each feature has two contrastive values.

s - stative	t - telic	d - durative
n - non-stative	a - atelic	p - non-durative (or punctual)

For explanations and examples of situation types based on these semantic features, please refer to Section One, Chapter II of this dissertation.

Grammatical Marking with Aspectual Particles

GUO - <i>guo</i>	ZAI - <i>zai</i>	ZHE - <i>zhe</i>
------------------	------------------	------------------

How particle *le* is coded deserves further explanation. Since it is not always possible to tell the so-called verbal *-le* from sentential *le*, the coding of viewpoint particle *le* is not based on syntactic distribution. Instead, it is coded by its function. As I have demonstrated in Section Two of Chapter II that perfective *le* and CRS *le* are the same particle except that the latter happens to be in a clause depicting a situation with speech time as the default reference time. Therefore what is relevant here is only the perfective *le*, or double *le* whereby CRS function is emphatically marked. Finally, particle *le* can be fused with another sentential particle *a* and appear in the form of *la* (Chao 1968). When all the above is taken into consideration, the possibilities of meaning of the particle *le* coded in the present study include

L1	perfective <i>le</i> (regardless of where it appears in the clause)
----	---

L2 double *le*

La *le + a*

Discourse Marking with Adverbials

Adverbial expressions of temporal advancement

A11 – AFTER type 1

A12 – AFTER type 2

A13 – AFTER type 3

A14 - BEFORE

AFTER Type 1, subtype 1: There are three major types of expressions that clearly indicate temporal sequence by implying one situation obtains AFTER another. The first type has two subtypes. The first subtype is conjunctions that are either pure temporal conjunctions, such as *ranhou* "afterwards", or are causal conjunctions that have conventional temporal implications such as *jieguo* "as a result".

ranhou "afterwards"

(120)

7.1 *ranhou*

afterwards

7.2 *ta ting xialai*

he stop down

he stopped. (Narrative T)

***houlai* "later"**

(121)

20.1 *zai houlai*,

again later,

Then later,

20.2 *you youge xiao haizi qi danche lai.*

exist one little boy ride bike come

a boy came by on a bike. (Narrative L)

***yushi* "thereupon/thereafter"**

(122)

29.2 *tamen zai lushang faxian neige xiao haizi diao le de yiding maozi.*

they at road on find that little boy drop LE DE one hat.

They found the hat the boy dropped.

30.1 *yushi*,

thereupon,

so,

30.2 *neige na zhe wanju de xiao nan hai jiu jian qi tade maozi.*

that carry ZHE toy DE little boy then pick up his hat.

the boy with the toy then picked up the hat. (Narrative D)

jiu "then"

(123)

40.1 *jiu chui koushao jiao ta huilai,*

then blow whistle call him back

Then the boys whistled to call him back. (Narrative L)

you "again"

(124)

55.1 *ranhou,*

then,

55.2 *you kankan tamen sange xiao haizi,*

again look them three little boys

he then looked at the three boys,

55.4 *dou zai chi bale.*

all ZAI eat pear

they were all eating pears. (Narrative F)

(xian)...zai "first...then"

(125)

23.2 *ta xian ba jiaotache fang xialai*

he first BA bike put down

He first lay down the bike.

23.3 *xian ba lanzi ban guolai zhihou*

first BA basket move over after
and after he brought over the basket,

23.4 *zai ba jiaotache li qilai*

then BA bike stand up
he then stood up the bike again. (Narrative G)

jiezhe "following that"

(126)

28.1 *guolai zai jiezhe shi yige nage nu haizi chuxian le.*

over then **following that** is one that girl appear LE

Then following that a girl appeared. (Narrative G)

jieguo "as a result"

(127)

39.2 *jieguo,*

as a result,

39.3 *faxian san lou biancheng liang lou le.*

find three basket change into two basket LE

He found that three baskets of pears have turned into two. (Narrative S)

suoyi "therefore"

(128)

24.1 *suoyi*,

so,

24.2 *tade guozi quanbu dou diao zai dishang.*

his fruit all entirely fall at ground on

His pears all fell on the ground. (Narrative Q)

name "in that case"

(129)

57.3 *ta zheng yao ba weiqun limian zhai xialai de dao zai nage lanzi li,*

he just want BA apron in pick down DE pour At that basket in

He was just about to pour the pears from his apron into the basket,

58.1 *name yikan,*

in that case one look

then he took a look, (Narrative G)

AFTER Type 1, subtype 2: The second sub-type is preposed adverbial clause introduced by subordinate conjunctions such as ...*yihou* "after". Like the first sub-type, it also expresses the meaning of AFTER. However, unlike the first type, which is anaphoric, the second type is not anaphoric and its function is to signal that the situation encoded in the following main clause is on the storyline.

...yihou/zhihou "after..."

(130)

15.1 *tamen liangge jiushi mian dui mian de zheyang jiaocuo guoqu yihou,*

they two just face to face DE this way pass by **after**

After they passed by each other face-to-face,

15.2 *zheige xiao nan hai haishi haoxiang hen tanlian de huitou kan neige xiao nuhai.*

this little boy also seem very infactuated DE turn around look that little girl

the boy seemed to have turned around to look at the girl, whom he found very

attractive. (Narrative D)

yi...(jiu) "as soon as..."

(131)

34.1 *ta yi xialai,*

he **once** come down

As soon as he came down,

34.2 *faxian neige lanzi zenme shao le yige.*

find those baskets how miss LE one

he found somehow one basket was missing. (Narrative H)

zheng...de shihou "was...when"

(132)

26.1 *ta zheng qingdian tade shuiguo de shihou,*

he **right** count his fruit DE time

When he was **right there** counting his pears

26.2 *zhei sange haizi gaogaoxingxing de zheng chi zhe,*

these three boys happily DE right eat ZHE

these three boys happily eating the pears

26.3 *cong tade mianqian jingguo.*

from his front pass by

passed by him. (Narrative N)

AFTER Type 2: The status of the second type is not quite clear. It could be a bare nominal phrase. But such phrases could also be extended to become a reduced clause. Nonetheless, they explicitly encode temporal information. Unlike the first major type that encodes a temporal relationship of AFTER, this type of expression actually encodes the time interval between two consecutive events. However, being couched between two events, it acquires the conventional meaning of temporal sequence.

(guo le) yihui 'r/yixia/bujiu "after a while"

(133)

14.2 *guo le yi xia,*

pass LE one stroke,

After a while,

14.3 *you yige xiao hai qi le yi liang jiaotache guo lai.*

Exist one little child ride LE one bike over come.

a child came by on a bike. (Narrative J)

(134)

14.1 *guo le bujiu,*

pass LE not long,

After a while,

14.2 *you yige nan haizi qi zhe jiaotache,*

exist one boy ride ZHE bike,

a boy riding a bike,

14.3 *nan haizi qi jiaotache lai.*

boy ride bike come

came by. (Narrative F)

AFTER Type 3: The third type is adverbs such as *turan* “suddenly”. It neither establishes temporal relation of AFTER nor does it indicate lapse between two events. What it does is introduce an event as a contingency, something that happened somewhat unexpectedly. It does not have to appear between two consecutive events.

turan/huran "suddenly"

(135)

52.3 *jiushi daqiu de neige ren gangcai meiyou dong,*

just play ball DE that person just now not move

The boy who had been playing the ball did not move,

52.4 *zheige shihou huran kandao malu zhong,*

this moment **suddenly** see road middle

he **suddenly** saw in the middle of the road,

52.5 *neige xiao haizi gangcai dai zhe yiding maozi diao zai lu de zhongjian.*

that little boy just now wear ZHE one hat drop At road DE middle.

losing the hat that the boy had been wearing. (Narrative E)

Some onomatopoeia like *huala* in the following example can also function as a variant of *huran*.

(136)

10.2 *ta jiu tui chezi zou.*

he then push bike walk

He then started walking his bike.

11.1 *huala neige maozi chui dao dishang le.*

huala that hat blow to ground on LE

Suddenly the hat was blown off to the ground. (Narrative A)

BEFORE

Temporal expressions that indicate BEFORE are not very common as foreground structures. A situation that is located before another, which most likely has already been

mentioned, is bound to be out of sequence and thus in the background. A situation located before another which is mentioned for the first time, refers forward rather than backward. It seems referring forward is less common than referring backward.

Adverbial expressions of temporal overlap or simultaneity

A21 - OVERLAP/SIMULTANEITY Type 1

A22 - OVERLAP/SIMULTANEITY Type 2

OVERLAP Type 1: this type includes subordinate adverbial clauses that indicate temporal overlap or simultaneity, or subordinate clauses that express relations other than temporal, for example cause-effect relations, but conventionally imply atemporal relations such as *yinwei*.

yibian/mian...yibian/mian "while...while"

(137)

40.1 *yimian ken ya,*

while gnaw

While gnawing at the pears

40.2 *ken ya,*

gnaw

gnawing

40.3 *zou zou zou,*

walk walk walk

he walked and walked, (Narrative O)

...*de shihou* "when, while"

(138)

6.2 *zou dao lu shang de shihou*,

walk to road on DE time

When he hit on the road,

6.3 *cashenguo yige nuhai*,

pass by one girl

he passed by a girl. (Narrative A)

(139)

13.2 *nei sange nan haizi zouguo neike shu dixia de shihou*,

those three boy walk by that tree DE time

while those three boys walked by the tree

13.3 *zhenghao jingguo neige cai shuiguo de ren*.

it happened pass by that pick fruit DE person

they happened to pass by the person who was picking the pears. (Narrative C)

...*de tongshi* "meanwhile"

(140)

34.1 *zai huan gei ta de tongshi*,

at return to him **DE same time**

While he was returning him his hat,

34.2 *women bu xiaode ta yong shenme fangshi de jiaoyi,*

we do not know he use what method DE transaction

we don't know in what way

36.1 *ta na le sange guozi zou le.*

he take three fruit leave LE

he took three pears and left. (Narrative D)

yihou/zhihou/huitou "...after..."

(141)

51.1 *ba maozi huan gei ta **zhihou**,*

BA hat return to him **after**

When he got back his hat

51.2 *ta jiu song ta neige sange shuiguo.*

he then give him that three fruit

he then gave the boy three pears. (Narrative G)

(142)

37.2 *na le sange guozi **huitou**,*

take LE three fruit **turn around**

Having taken three pears,

37.3 *ta jiu fen le liangge gei tade tongban.*

he then divide LE two to his company

he then gave two to his friends. (Narrative D)

yinwei "because"

(143)

8.2 *yinwei ta hen pang,*

because he very heavy

Because he was very heavy,

8.3 *neige tizi hen xiang bu kan zhong fu de yangzi.*

that ladder very like not stand heavy load DE look

the ladder seemed to be unable to stand his weight. (Narrative S)

yi ... (jiu) "as soon as ... then"

(144)

34.1 *ta yi xia lai,*

he **as soon as** down come

As soon as he came down the tree,

34.2 *faxian lanzi zenme shao le yi ge.*

find basket how miss LE one CLF

he found that one basket was missing. (Narrative H)

OVERLAP Type 2: Adverbs indicating temporal overlap or simultaneity

yijing "already"

(145)

24.1 *neige shihou ne,*

that moment NE

At that moment,

24.2 *nongren yijing xialai le.*

farmer **already** come down LE

the farmer had **already** come down the tree. (Narrative T)

benlai/yulai "originally, at first"

(146)

19.3 *kandao neige zhuren bu zhuyi,*

see that owner not notice

He saw that the farmer was not attentive,

19.4 *ta benlai xiangyao na yige shuiguo,*

he **originally** want take one fruit

originally he only wanted to take one pear,

21.1 *danshi houlai,*

but later, (Narrative G)

(xianqian)...xianzai "previously...now"

(147)

28.1 *xianqian meiyou zai neige bale de shihou, ta qi che yijing bijiao kunnan le,*

previously not carry that pear DE time, he ride bike already kind of difficult LE

He already had a hard time riding the bike previously when he was not carrying
any pears,

28.2 *xianzai hai you yi lou bale,*

now also have one basket pear

he now was carrying a basket of pears, (Narrative F)

yizhi "always, all the time, have been"

(148)

60.3 *hai na zhe tade neige shuiguo zai kou limian yizhi chi zhe chi.*

also hold ZHE his that fruit At mouth in **keep** eat **ZHE** eat

(they) also had his pears and were eating them **all the time**. (Narrative G)

zheng "right in the middle of"

(149)

26.1 *ta zheng qingdian tade shuiguo de shihou,*

he **right** count his fruit DE time

When he was **right there** counting his pears,

26.2 *zhei sange haizi gaogaoxingxing de zheng chi zhe,*

these three boys happily DE right eat ZHE

these three boys happily eating the pears,

26.3 *cong tade mianqian jingguo.*

from his front pass by

passed by him. (Narrative N)

buduan "keep"

(150)

25.1 *ta jiu buduan de pai na ge*

he just **non-stop** DE pat that

He then **kept** patting that (paddle ball) (Narrative D)

gangcai "just now"

(151)

22.3 *gangcai zai cong shushang xialai*

just now At from tree on come down

A while ago, he came down the tree. (Narrative E)

yiban "normally"

(152)

20.2 *xiang women yiban tingche,*

like us **usually** park,

Usually when we park, (Narrative F)

Foreground

Results

The results for encoding of foreground information are presented in Table 1. When temporal advancement is explicitly indicated by the use of perfective viewpoint particle, or by adverbial expressions regardless of the viewpoint they appear in, or by both, the clause is considered to explicitly encode temporal advancement. When such explicit encoding is not available, it is said that temporal advancement has implicit encoding. Among the clauses encoded implicitly for temporal advancement, some have the semantic feature of telicity while others do not or are presented in the imperfective viewpoint. Since those situations that are telic and presented in the neutral viewpoint can move narrative time, they encode temporal advancement without overt markers. However, for those that are atelic or presented in the imperfective viewpoint, contextual information must be present to license their presences in the foreground of the story. Therefore situations that need contextual support to move narrative time rely on pragmatic encoding, while all the rest of the situations rely primarily on some kind of semantic feature either inherent in the situation, or in the viewpoint particle, or in the temporal adverbials, or any combination these features. Table 1 presents the tally of explicit vs. implicit encoding and semantic vs. pragmatic encoding for each native speaker and for the group as a whole.

Table 1 Encoding of Foreground by Native Speakers of Chinese

Subjects: number of F clauses	semantic encoding					pragmatic encoding				
	explicit encoding				implicit encoding					
	T	adv.	le	adv.+le	T	[+telic]	T	[-telic]	[+stative]	impf.
A: 19	17	13	0	4	2	2	0	0	0	0
B: 31	27	18	4	5	4	2	2	1	1	0
C: 12	6	2	1	3	6	5	1	1	0	0
D: 36	26	15	7	4	10	9	1	1	0	0
E: 46	27	19	2	6	19	17	2	2	0	0
F: 36	34	25	3	6	2	2	0	0	0	0
G: 34	26	21	0	5	8	6	2	2	0	0
H: 30	23	17	4	2	7	5	2	2	0	0
I: 16	14	12	0	2	2	2	0	0	0	0
J: 33	19	14	0	5	14	9	5	4	0	1
K: 44	31	20	4	7	13	11	2	1	1	0
L: 39	27	22	2	3	12	6	6	4	2	0
M: 23	23	18	0	5	0	0	0	0	0	0
N: 18	14	4	10	0	4	3	1	0	1	0
O: 38	32	15	6	11	6	3	3	2	1	0
P: 20	14	8	3	3	6	6	0	0	0	0
Q: 11	10	8	0	2	1	1	0	0	0	0
R: 8	8	3	2	2	1	1	0	0	0	0
S: 31	23	11	3	9	8	6	2	2	0	0
T: 23	18	14	0	4	5	5	0	0	0	0
Total: 548	418	279	51	88	130	101	29	22	6	1
%	76	51	9	16	24	19	5	3.8	1	0.2

Findings

In the foreground, native speakers of Chinese prefer explicit means of encoding temporal advancement. Three out of four foreground clauses (76%) were explicitly marked with temporal adverbials, or perfective particle *le*, or both. However, they do not

very often use perfective markers like *le* alone to mark temporal movement, because only about nine percent of all the foreground clauses were marked with perfective *le* alone. Native speakers of Chinese also choose not to rely solely on pragmatic means to encode temporal advancement when they can, as only a small portion (5%) of foreground clauses needed contextual support (pragmatic). Explicit encoding can be broken down into encoding with adverbials alone, with adverbials and *le*, and with *le* alone. Implicit encoding can be broken down into telic situations in neutral viewpoint and temporally unbounded situations (atelic or in imperfective viewpoint).

Table 1-a Repertoire of Encoding Temporal Advancement by Native Speakers

Explicit encoding	76%
adverbial	51%
adverbial plus <i>le</i>	16%
<i>le</i>	9%
Implicit encoding	24%
telic	19%
contextual/pragmatic	5%

We can conclude that, unlike in English, the grammatical perfective viewpoint marker in Chinese is not the most often used means of encoding temporal movement. I will discuss the use of adverbials, telic situations, and reliance on contextual information, respectively, in the following section. The use of the perfective viewpoint marker *le* will be discussed in a separate chapter.

Discussion

The Use of Adverbials

The results of this study show that native speakers of Chinese overwhelmingly prefer to encode temporal advancement by explicit means, and for that matter, use more adverbials than grammatical viewpoint markers. The use of adverbials for foreground purpose by native speakers in the Pear Stories is summarized in Table 1-b. For how temporal adverbials are classified, please refer to the previous chapter.

Table 1-b Use of Adverbials in Foreground by Native Speakers

	A11	A12	A13	A11/A12, A11/A13		A11/le	A12/le	A13/le
A:	13	0	0	0	0	3	0	1
B:	18	0	0	0	0	5	0	0
C:	2	0	0	0	0	3	0	0
D:	15	0	0	0	0	4	0	0
E:	17	0	1	0	1	6	0	0
F:	23	2	0	0	0	6	0	0
G:	21	0	0	0	0	5	0	0
H:	17	0	0	0	0	2	0	0
I:	12	0	0	0	0	2	0	0
J:	13	0	0	0	1	5	0	0
K:	20	0	0	0	0	7	0	0
L:	22	0	0	0	0	3	0	0
M:	18	0	0	0	0	5	0	0
N:	4	0	0	0	0	0	0	0
O:	15	0	0	0	0	11	0	0
P:	8	0	0	0	0	3	0	0
Q:	8	0	0	0	0	2	0	0
R:	3	0	0	0	0	2	0	0
S:	10	0	0	0	1	9	0	0
T:	14	0	0	0	0	4	0	0
total	273	2	1	1	3	87	0	1

Although as a group native speakers used varied types of adverbial expressions for foreground purpose, they overwhelmingly used adverbial expressions of the Type A11. Fifteen of the twenty native speakers used exclusively type A11 adverbials, namely adverbials that express the temporal relation of AFTER by encoding temporal succession. Those five native speakers who did use adverbials of the types other than A11 altogether only used six instances of those types of adverbial expressions (in boldface print in Table 1-b). In short, Type A11 adverbial expressions is the preferred means by native speakers of Chinese to explicitly encode temporal advancement.

Looking through the data for the individual expressions of temporal advancement used by native speakers, I found that each native speaker (except speaker R) used at least four different such expressions, most of them of Type A11. Some used as many as nine different temporal adverbial expressions, for example in Narrative D. The only exception is Narrative R, which is very short, containing only eight foreground clauses, five of which were explicitly encoded with an adverbial.

The Use of Perfective *le*

Generally speaking, native speakers rarely use the perfective viewpoint marker alone to encode temporal advancement. Only nine percent of the foreground clauses were encoded with *le* alone. Adding the sixteen percent which are marked with *le* and adverbial expressions, there is altogether a quarter of the foreground clauses marked with *le*. The next chapter will be devoted exclusively to use of *le* in foreground.

Reliance on Telicity

Native speakers used implicit means to encode temporal advancement for one out of four foreground clauses. When they did choose implicit encoding means, they relied more often on the telic feature of the situation than on contextual support. It should be pointed out that in addition to telicity, they rely on the discourse Principle of Natural Order, which states that situations presented in certain order reflects the real world order. When the principle of being orderly holds, a telic situation is interpreted as a narrative event. However, an atelic situation, as will be shown in the discussion of contextual support, needs contextual information to be interpreted as in the foreground. Among the 130 foreground clauses implicitly encoded for temporal advancement, 101 refer to telic situations, which are bounded temporally, accounting for seventy-eight percent of the implicitly encoded foreground clauses.

Contextual Support

Native speakers of Chinese map the function of time to different linguistic forms, some of them being at the grammatical level (aspectual particles) and some at the lexical level (adverbials) and still others at the clause level (situation types). There are even times, although rare, when they map a certain function, for example, temporal advancement, to structures whose temporal values are incompatible with temporal advancement. Such cases deserve special attention, because such mapping can only be achieved with the support of contextual information. If our teaching only deals with mapping temporal advancement to certain linguistic structures, we do learners a

disservice by ignoring the role of pragmatic knowledge in the encoding of temporality. The question we will ask is in what circumstances L1 speakers resort to contextual information at all.

First of all, native speakers seldom rely solely on contextual information to encode temporal advancement. Of the 548 foreground clauses in the Pear Stories told by native speakers, only twenty-nine were so encoded, accounting for five percent of the total. It seems there are special circumstances that justify sole reliance on contextual information. I will examine those situations so encoded in terms of their feature of boundedness, their discourse contexts, and perhaps discourse conventions.

All the twenty-nine situations are somehow unbounded. The majority of them (twenty-two out of twenty-nine) are atelic situations in neutral viewpoint. A small portion of them (six out of twenty-nine) are stative situations in neutral viewpoint. There is even a case of activity type in the imperfective viewpoint. Since they are temporally unbounded, normally they cannot advance narrative time. Therefore, contextual information is necessary for them to be interpreted as foreground clauses.

Although all the twenty-nine situations are unbounded, none of them overlaps with the previous event. Usually, as I have explained in Chapter III, an unbounded situation, because of its unbounded situational feature or because of it being presented in the imperfective viewpoint, does not advance narrative time. Instead, it typically overlaps the time of the previous narrative event. However, discourse context may make it clear that the unbounded situation does not overlap but rather follows the time of the previous event. In other words, these unbounded situations hold as a result of the previous event.

The main verbs in the following two episodes are *xiang* "think" and *juede* "think, feel". The situations expressed by both of the clauses they are in are activities. The fruit picker, according to Narrator C, did not come to believe that it must be the three boys who had stolen his pears, an event described in clause 14.3, until the moment that he actually saw those three walking by, a situation described in 14.2. Similarly, according to Narrator E, the fruit picker started to feel something was wrong, a situation described in clause 69.1 only when he saw those three boys walking by eating pears. It is obvious that discourse context tells the listener of the story that the situations described by verbs such as "think" and "feel" do not overlap but rather follow the previous events. And it is exactly because of such discourse context that they can be interpreted as on the storyline, although the situations themselves are unbounded. Other activity verbs used in similar circumstances include *jixu* "continue", *chi* "eat", *zou* "walk", *chui koushao* "whistle", *jiao* "call", *bang* "help". There are altogether twenty instances where activity verbs were used in this way.

(153)

14.2 *ta kan le na sange nan haizi*

he see LE those three boy

He looked at those three boys.

14.3 *ta xiang yiding shi zhe sange nan haizi tou le wo de shuiguo*

he think must be these three boy steal LE I Gen fruit

He thought "it must be those three who had stolen my pears". (Narrative C)

(154)

68.2 *kan dao naban*

see that side

The farmer saw over there

68.3 *na sange xiaohai zou guolai*

that three child walk over

those three boys were walking by

68.4 *shou shang haoxiang na zhe nage shuiguo*

hand on seem hold ZHE that fruit

with pears in their hands.

69.1 *ta jue de hen qiguai*

he feel very strange

He felt very strange.

69.2 *leng zai na*

dumbfound At there

He was dumbfounded, standing there. (Narrative E)

A situation can also be unbounded because it is presented in the imperfective viewpoint. The only example in the native speakers' Pear Stories is found in the following episode, where the situation in clause 34.1 is presented in the progressive *zai*.

(155)

32.2 *nage xiao haizi jiu ba zhe sange bale fen 'gei ta lingwai liangge xiao haizi*

that boy then BA this three pear share his other two boy

This boy then shared the pears with his companions,

33.1 *yiren yige bale*

each person one pear

so each person had a pear.

34.1 *tamen zai chi bale yimian zou yimian chi*

they ZAI eat pear while walk while eat

They were eating pears while walking. (Narrative J)

Like activities, states are unbounded situations. The situation in 22.1 in (156) *hen gaoxing* "very happy" is stative. However, the stative situation does not overlap the situations in clause 21.2 and 21.3. Instead, it follows them. Altogether, there are two cases of stative situations on the storyline with contextual support.

(156)

21.2 *ta na le sange shuiguo*

he take LE three fruit

He took three pears,

21.3 *jiaogei le zhei sange haizi*

give LE these three boy

gave them to those three boys.

22.1 *zhei sange haizi hen gaoxing*

these three boy very happy

They were very happy. (Narrative N)

Finally, situations described by clauses with modal verbs or in the negative forms are also considered to be stative. The situation described by clause 14.1 in (157) *yaochi* "want to eat" is the only foreground clause in the native speakers' Pear Stories with a modal verb in it. And of course, the discourse context indicates that temporally it follows the event in 13.2 "see the fruit". In this same episode, the situation in clause 15.1 is in the negative form and therefore is stative. However, it does not overlap temporally with the previous situation in clause 14.1. The situation "the guy simply wouldn't let him eat them" in clause 15.1 is the response of the person to the goat's desire to eat the pears and therefore is temporally posterior. There are altogether five instances of situations in the negative forms on the storyline.

(157)

13.2 *niu kandao neige shuiguo*

cow see that fruit

The cow saw the fruit.

14.1 *ta yizhi huitou yao chi*

it keep turn back want eat

It kept looking back, wanting to eat that fruit

15.1 *neige ren jiu bu gei ta chi*

that person simply not give him eat

That person did exactly the opposite: did not let it eat the fruit. (Narrative L)

In terms of interclausal relations, all the twenty-nine situations form an "expectancy chain" with their previous situations. According to Longacre (1996), expectancy chains involve actions customarily occurring in sequence. Since it is a matter of custom and convention, expectancy chains are to a large extent conditioned by the culture. The examples found in English given by Longacre (1996) include "leave (some place) ... go ... arrive", "search ... find", "fall down ... smash", and "get ... bring/take ... dispose of". The action sequence may involve different actors as in "shoot ... die", "call ... answer", "give ... appreciate".

Seen in this light, all the situations I have discussed in (153) through (157) actually form expectancy chains with their previous events according to some conventions in Chinese. The chain in episode (153) and (154) is "find/discover ... reflect", "give/get (food) ... eat" in episode (155), "give ... appreciate" in episode (156). In episode (157), clause 14.1 and 13.2 form a chain "find (food) ... want to eat". Clause 15.1 and 14.1 form a chain of their own too, which can be paraphrased as "want (food) ... satisfy (the want)", although the chain appears as a frustrated chain. The notion of frustration as defined in Longacre (1996) involves two propositions in such a way that proposition P ("the goat wanted to eat the pears") normally implies another proposition Q ("the person leading the goat met its want by letting it eat the pears") but rather than Q the opposite value of Q occurs. Instead of letting the goat eat the pears, the person did exactly the opposite, that is, refused him the fruit. This may be called expectancy reversal or counterexpectation.

Summary

Generally speaking, native speakers of Chinese prefer encoding foreground information explicitly. However, the preferred explicit means of encoding is temporal adverbials rather than perfective viewpoint markers. When they choose to use implicit encoding, they prefer to rely on the telic feature of the situation plus the discourse organization Principle of Natural Order. It is possible for them to encode temporal advancement by relying exclusively on the discourse context, although they rarely resort to such a device. When they do choose to avail themselves of this device, it is always the case that the immediately preceding discourse indicates that the unbounded situation forms a sequence with the previous narrative event rather than overlaps it, and the two situations form an expectancy chain that makes sense to the native speakers who share the same culture.

Background

Results

The results for the encoding of background information are presented in Table 2. Background is characterized by temporal overlap or simultaneity. Such temporal relations can be encoded explicitly or implicitly. Explicit encoding includes such devices as temporal adverbials, imperfective markers, or their combinations. Implicit encoding includes such devices as atelic situations in neutral viewpoint or temporally bounded (telic situations and situations presented in perfective viewpoint). Temporally bounded situations need contextual support to appear in the background and therefore are pragmatic devices while all the rest are semantic devices. For detailed discussion and

classification of the different types of semantic devices, please refer to the beginning of this section.

Table 2 Encoding of Background by Native speakers of Chinese

	semantic encoding								pragmatic encoding			
	explicit encoding				implicit encoding				T	[+telic]	<i>le</i>	<i>la*</i>
	T	adv.	impf	adv./impf	T	[+stative]	[-telic]	T				
A: 7	5	2 2	1 0	0	2	1	1	0	0	0	0	
B: 25	11	6 0	3 1	1	14	6	0	8	4	3	1	
C: 8	4	4 0	0 0	0	4	0	4	0	0	0	0	
D: 38	15	5 1	8 0	1	23	13	5	5	2	3	0	
E: 76	29	16 1	10 0	2	47	33	10	4	4	0	0	
F: 35	18	6 3 1*	4 4	0	17	13	2	2	1	0	1	
G: 49	24	11 4	4 1	4	25	20	3	2	1	1	0	
H: 17	10	4 1	4 1	0	7	3	2	2	2	0	0	
I: 10	5	0 1	2 1	1	5	5	0	0	0	0	0	
J: 19	8	1 2	2 3	0	11	7	1	3	0	3	0	
K: 37	18	4 5	7 2	0	19	13	4	2	1	1	0	
L: 21	6	1 0	2 3	0	15	11	1	3	0	1	2	
M: 30	12	6 0	4 1	0	18	9	3	6	1	1 1**	3	
N: 26	10	6 1	0 0	3	16	6	2	8	4	4	0	
O: 28	14	3 3	3 2	3	14	3	4	7	3	2	2	
P: 13	9	5 0	2 0	2	4	1	1	2	1	1	0	
Q: 21	8	4 1	2 1	0	13	11	1	1	0	1	0	
R: 2	1	1 0	0 0	0	1	0	1	0	0	0	0	
S: 40	20	8 1	9 0	2	20	14	0	6	1	3	2	
T: 17	9	4 1	4 0	0	8	5	1	2	1	1	0	
t: 519	236	97 27 1*	71 20	19	283	174	46	63	26	25 1**	11	
%	45	24	18	3	55	33	10	12	5	5	2	

* Type A21 adv. and Type A22 adv. appear in the same clause

** double *le* construction

*la** arguably fusion of *le* and *a*

Findings

In the background, there seems to be a slight preference for implicit encoding over explicit encoding. Slightly more than half of the times (55%), L1 speakers chose to encode temporal overlap or simultaneity by implicit means, and slightly less than half of the times (45%) by explicit means. Among the explicit encoding, adverbials were used most often, accounting for 24 percent of all the background clauses. However, only 18 percent of the background clauses were encoded with imperfective viewpoint markers *zai* or *zhe* alone, which is higher than the percentage of aspectual markers in the foreground (about 9 percent). When they chose implicit encoding, most of the time (43%) they relied on the unbounded temporal feature of the situation rather than on contextual information alone, for about 12 percent of all the background clauses needed contextual information for correct encoding or interpretation, higher than the 5 percent in foreground. Explicit encoding can be broken down into encoding with adverbials alone, with imperfective markers *zhe* or *zai*, and with their combination. Implicit encoding can be broken down into atelic and stative situations in neutral viewpoint and temporally bounded situations (telic or in perfective viewpoint), which are licensed by contextual support.

Table 2-a Repertoire of Encoding Temporal Overlap by Native Speakers

Explicit encoding	45%
adverbial	24%
<i>zhe/zai</i>	18%
adverbial plus <i>zhe/zai</i>	3%
Implicit encoding	55%
-telic/+stative	43%
contextual/pragmatic	12%

Discussion

The Use of Adverbial Expressions

Native speakers of Chinese used temporal adverbials to encode temporal overlap for 28 percent of the background clauses, adverbials alone for 24 percent and adverbials together with imperfective viewpoint markers for 4 percent. There are altogether 144 background clauses encoded with adverbials of temporal overlap. The majority of them, 106 out of 144, are of Type A21, namely subordinate adverbial clauses that indicate temporal overlap or simultaneity, or subordinate clauses that express relations other than temporal but conventionally imply atemporal relations such as *yinwei*. Some of them, thirty-seven out of 144, are of Type A22, adverbial expressions indicating temporal overlap or simultaneity such as *yijing* "already". There is only one case where a Type 21 and Type 22 occurred in the same clause.

The Use of Imperfective Viewpoint Markers

Native speakers used imperfective viewpoint markers to encode temporal overlap for about 22 percent of the background clauses, 18 percent with a marker alone and about 4 percent in the presence of an adverbial. There are altogether 110 background clauses with an imperfective viewpoint marker. The majority of them, seventy-nine out of 110, are imperfective viewpoint marker *zhe*. Some of them, thirty-one out of 110, are cases of progressive *zai*.

Reliance on Atelic/Stative Situations

Native speakers of Chinese slightly prefer implicit encoding in the background. When they choose implicit encoding, they are more likely to rely on atelic or stative situations, as 78 percent of the implicitly encoded background clauses, or 220 out of 283, involve atelic or stative situations.

Reliance on Contextual Support

There are 12 percent of the background clauses whose interpretation needed contextual support. Most of them are bounded situations, with 26 of the 63 such clauses being telic situations and 26 situations presented in the perfective viewpoint. There are 11 clauses marked with *la*, the fusion of particle *le* and particle *a*. I will examine these 63 cases to show how contextual information is necessary for correct understanding of the story.

Although the situation *guolai* “come over” in clause 14.2 in the following episode from Narrative D is telic, it does not advance narrative time.

(158)

13.3 (*zheige xiaohai*) *zai lushang pengdao lingwai yige nuhaizi*

(this boy) At road meet other one girl

The little boy met another girl on the way,

14.2 *ye qi zhe yiliang jiaotache guolai*

also ride ZHE one bike come over

who was also riding on a bike. (Narrative D)

On the contrary, the story context indicates that it encodes temporal overlap/simultaneity. The imperfective viewpoint marker *zhe* in clause 14.2 indicates that the situation “come

over” is ongoing. With information from clause 13.3, the listener knows that it is ongoing when the event *pengdao* “meet” happened. So temporally the situation “come over” does not follow the previous event “meet”, but rather includes it.

In episode (159), both the situation in clause 24.2 *dao shu xia lai* “come down the tree” and that in clause 25.1 *kaishi faxian* “begin to notice” are telic and therefore temporally bounded.

(159)

23.1 *(zhei sange haizi) zhenghao jingguo le neige cai shuiguo lao xiansheng*

(these three boys) it happened pass by LE that pick fruit old gentleman

The three boys happened to pass by the man who had been picking fruit.

24.1 *zai tamen hai mei dao de shihou,*

at they still not arrive DE time

Before they arrived,

24.2 *cai shuiguo de ren dao shu xia lai,*

pick fruit DE person to tree below come

the man had already come down from the tree.

25.1 *kaishi faxian ta shao le yilou shuiguo.*

begin find he miss LE one basket fruit

And began to notice that one basket was missing. (Narrative N)

However, according to the information in clause 23.1, those two events actually happened before the immediately preceding narrative event *jingguo le neige xiansheng* “pass by that gentleman” in clause 23.1. Therefore, the two events do not follow the

previous narrative event. Instead, both situations are already true by the time of the event in clause 23.1.

The three situations in Clause 10.1, 10.2 and 10.3 from the following episode are all temporally bounded, the first and third being telic and the second presented in the perfective viewpoint.

(160)

8.2 *jiushi you yige ren ao,*

just exist one person

There was a man,

8.3 *zai zhai bale.*

ZAI pick pear

who was picking pears.

9.1 *na ta jiu zai shushang zhai.*

so he just At tree on pick

He was picking pears in the tree.

10.1 *na ta jiu zhai yi zhai,*

so he just pick and pick

So he kept picking.

10.2 *tade daizi man le,*

his pocket full LE

when his pocket became full,

10.3 *ta jiu xialai ba daizi limian de bale fangdao louzi limian qu*

he then come down BA pocket in DE pear put basket in to

he would then come down and put the pears into the basket.

11.1 *na ta zai zhai de shihou...*

so he ZAI pick DE when...

So when he picking pears ...

11.2 *diao xialai yige.*

fall down one

A pear fell off. (Narrative B)

As a matter of fact, not only are they all temporally bounded, they actually form a sequence of events. However, although temporally ordered with respect to each other, they do not advance narrative. There is not even an event that they can follow, because they are in the beginning of the story and constitute part of the orientation. It is not until clause 11.1 that the listener can get a sense of the coming of the first narrative event. The three events are naturally interpreted as routine activities involved in picking fruits. Since they are expository of a procedure, temporally all the three situations overlap that of the one in clause 11.2.

A fourth way that a temporally bounded situation appears in the background is when the situation simply repeats or refers back to a previous situation.

(161)

18.1 *ranhou ta qi chezi.*

then he ride bike

Then he got on the bike.

19.2 *en, qi le yi xia,*

en, ride LE once

En, he paddled for a while.

19.3 *duimian ye you yige nu haizi qi che guolai.*

opposite also exist one girl child ride bike over come

A girl came over to him on a bike. (Narrative J)

Although the situation in clause 19.2 is temporally bounded both because it is telic and because it is presented in the perfective viewpoint, it does not advance narrative time, because it merely refers back to the previous narrative event coded in clause 18.1.

Up to now, it can be established that when a bounded situation appears in the background, there is necessarily independent information in the discourse to indicate (a) that the situation is ongoing and simultaneous with another situation (Band 2); or (b) that the situation is out of event sequence (Band 3); or (c) or that the nature of the situation is expository of a general procedure or circumstances (Band 4); or (d) the situation is repetitive (Band 7). Theoretically, a temporally bounded situation can be of any of the 6 bands of background clauses (Band 2 through Band 7). But the key point is that there is independent contextual information indicating temporal overlap with the previous narrative event.

Finally, I will discuss the possible function of *le* in the background. I have presented an argument in Section Two of Chapter II to the effect that the particle *le* encodes

perfective viewpoint. That it is traditionally considered to encode CRS in some contexts is because the situation it presents happens to have a reference time which coincides with the story time, the time associated with the latest development of the story. Consider episode (162).

(162)

34.3 *neige xiao haizi jiu po zhe jiao...die dao le ma.*

that little boy then limp ZHE foot...fall down LE

The boy was limping. You know, he had previously fallen from his bike.

(Narrative S)

If we start with the meaning of perfectivity, it follows that *le* presents the situation *diedao* “fall down”, which is telic, in the perfective viewpoint. As Smith (2000) theorized, a telic situation so presented is temporally bounded in Chinese and gets past tense interpretation unless otherwise stated. However, the situation is reported with reference to the time “the boy did something, limping”. Therefore, although the event “the boy fell” happened sometime before the event time the clause is supposed to report, it is located with reference to the time “he did something while limping”, the latest development of the story, a point up to which the story has progressed. The fact or state of the boy having fallen does not follow but rather overlaps the event clause 34.3 is supposed to report. The event “the boy had fallen” is reported as an afterthought and that it is reported at all is because it is relevant to the event “the boy was limping”.

Consider another example (163), in which the situation *xialai* “come down” is telic and can be presented in the perfective viewpoint.

(163)

31.2 *tamen jiu zou dao nei ge zhai shuiguo de ren nei ge difang.*

they then walk to that CLF pick fruit ASS person that CLF place

They then walked to the place where the farmer had been picking fruit.

32.1 *Ta hai meiyou zou dao de shihou,*

he still not walk to DE time

Before he walked to where the fruit picker was,

32.2 *neige zhai shuiguo de ren jiu xialai le.*

that pick fruit DE person already come down LE

the fruit picker had already come down. (Narrative M)

The particle *le* in clause 32.2 serves the same function, that of encoding perfectivity. Although it is compatible with an interpretation of CRS, for example, change of state, it can be shown that the perfectivity is the primary meaning and CRS is only an implicature. As a matter of fact, the postulation of CRS meaning for particle *le* in such context is not necessary at all. After all, it is the defining feature of a story that a listener will ask “and then what?” each time after an event is reported. An event is always relevant to some subsequent situation in a story, because a series of ordered events form the backbone of a story. That is the defining feature of a story. Relevance as defined in CRS is not a feature of the particle *le*, nor a feature of the whole clause that contains the

particle. It could just arise out of our understanding of how situations are constructed and how they relate to each other in a story.

Summary

While native speakers of Chinese predominantly prefer explicit encoding in the foreground, they slightly favor implicit encoding over explicit encoding in the background. Just as they disfavor the use of perfective viewpoint markers in the foreground, neither do they use imperfective viewpoint markers as often in the background. As they do in the foreground, they disfavor the use of contextual support in background and rely more often on the boundary feature of the situation.

The above findings show that native speakers of Chinese have available at their disposal a repertoire of explicit and implicit encoding devices, and that grammatical encoding is not necessarily the most often used means. The findings support previous research by Smith and Erbaugh (2000) and by others such as Christensen (1994).

Section Two. QUANTITATIVE STUDY OF ENCODING OF TEMPORALITY BY L2

The goal of this section is similar to that of the previous section except that the inventory of devices for encoding temporality in discourse to be established is for adult L2 learners. I will examine with this repertoire how often L2 speakers resort to each type or combination of types in encoding temporality, and how their patterns of encoding differ from or approximate those of the L1 speakers. The results will also shed light on the path of their development in the encoding of temporality in discourse. The same coding procedure as set in the previous section is followed, except in the case of L2 learners, a new category for coding the grounding/framing is added, namely the category

that is coded as M, which stands for meta-linguistic. For example, learners often found they did not have the linguistic resources to express themselves and indicated this.

(164)

53. *wo mei xue guo neige lanzi*

I not study GUO that basket

I haven't learned the word for "basket" yet. (High-level 5)

Clauses that express learners' attention to linguistic expressions are coded as Metalinguistic.

Foreground

Results

The results of encoding of temporal advancement by adult learners from three different levels are presented in Table 3. The data of the native speakers as a group are included for comparison. The coding scheme is the same as used for native speakers except that a column is added to tally the error made by learners using the perfective *guo* in the foreground. Coding results were checked by an independent native speaker of Chinese and any disagreements were resolved.

Findings

Low-level learners prefer implicit encoding, as they encoded temporal advancement implicitly 63 percent of the time. While they encoded 37 percent of the foreground clauses explicitly, the majority of them were explicitly marked with adverbials of

Table 3 Encoding of Foreground by Learners

subjects: number of F clauses	semantic encoding					pragmatic encoding					
	explicit encoding				implicit encoding						
	T	adv.	le	adv.+le	T	[+telic]	T	[-telic]	[+stative]	impf.	guo
L1: 23	8	7	1	0	15	11	4	2	2	0	
L2: 24	8	7	1	0	16	8	8	5	2	1	
L3: 39	13	12	0	1	26	21	5	5	0	0	
L4: 12	5	5	0	0	7	5	2	2	0	0	
L5: 13	5	2	3	0	8	8	0	0	0	0	
L6: 20	9	7	2	0	11	8	3	3	0	0	
L7: 14	5	5	0	0	9	4	5	4	1	0	
TL: 145	53	45	7	1	92	65	27	21	5	1	
%	37	31	5	1	63	45	18	14.5	3.3	0.2	
M1: 39	4	3	1	0	35	26	9	5	4	0	
M2: 22	13	6	5	2	9	7	2	2	0	0	
M3: 22	18	15	2	1	4	3	1	1	0	0	
M4: 36	27	22	3	2	9	4	5	5	0	0	
M5: 20	9	7	2	0	11	10	1	1	0	0	
M6: 38	18	17	0	1	20	16	4	2	2	0	
M7: 23	15	9	4	2	8	7	1	1	0	0	
M8: 38	14	14	0	0	24	19	5	4	1	0	
TM: 238	118	93	17	8	120	92	28	21	7	0	
%	49	39	7	3	51	38	13	9.8	3.2	0	
H1: 23	12	7	5	0	11	7	4	4	0	0	0
H2: 20	13	13	0	0	7	7	0	0	0	0	0
H3: 33	15	7	5	3	18	14	4	2	2	0	0
H4: 32	26	17	4	5	6	5	1	0	0	0	1
H5: 36	19	13	4	2	17	11	6	5	1	0	0
H6: 23	8	8	0	0	15	11	4	2	1	1	0
TH: 167	93	65	18	10	74	55	19	13	4	1	1
%	56	39	11	6	44	33	11	7.7	2.3	0.5	0.5
TN: 548	418	279	51	88	130	101	29	22	6	1	0
%	76	51	9	16	24	19	5	3.8	1	0.2	0

temporal advancement, accounting for 31 percent of all the foreground clauses. In contrast, perfective particle *le* only accounts for about 5 percent. When they chose implicit encoding, the preference was by means of telic feature of the situation (45%). Only about 19 percent of the foreground clauses needed contextual support. Explicit encoding can be broken down into encoding with adverbials alone, with adverbials and *le*, and with *le* alone. Implicit encoding can be broken down into telic situations in neutral viewpoint and temporally unbounded situations (atelic, stative, or imperfective viewpoint). The repertoire of encoding temporal advancement by low-level learners is presented in Table 3-a.

Table 3-a Repertoire of Encoding Temporal Advancement by Low-Level Learners

Explicit encoding	37%
adverbial	31%
<i>le</i>	5%
adverbial plus <i>le</i>	1%
Implicit encoding	63%
telic	45%
contextual/pragmatic	18%

Medium-level learners did not show clear preference for either explicit (49%) or implicit (51%) encoding. When they chose explicit encoding, they preferred temporal adverbials (39%), for perfective *le* only accounted for 10 percent overall for all the foreground clauses. Like low-level learners, when they chose implicit encoding, they preferred to rely on the telic feature of the situation (38%). Only about 13 percent of the

foreground clauses needed contextual support. Their repertoire of encoding temporal advancement is presented in Table 3-b.

Table 3-b Repertoire of Encoding Temporal Advancement by Medium-Level Learners

Explicit encoding	49%
adverbial	39%
<i>le</i>	7%
adverbial plus <i>le</i>	3%
Implicit encoding	51%
telic	38%
contextual/pragmatic	13%

As Table 3-c shows, high-level learners showed clear preference for explicit encoding (56%) over implicit encoding (44%). When they chose explicit encoding, preference was again adverbials (39%), and only about 11 percent of all the foreground clauses were marked with perfective particle *le* alone. When they chose implicit encoding, their preference was telic situation (33%), and only about 11 percent of the foreground clauses needed contextual support.

Table 3-c Repertoire of Encoding Temporal Advancement by High-Level Learners

Explicit encoding	56%
adverbial	39%
<i>le</i>	11%
adverbial plus <i>le</i>	6%
Implicit encoding	44%
telic	33%
contextual/pragmatic	11%

The following developmental patterns emerged after the proficiency levels were compared with each other and with the native speakers.

(i). Steady increase in reliance on explicit encoding and decrease in reliance on implicit encoding

Learners' encoding of temporal advancement in the foreground seems to undergo a shift from preference of implicit encoding to preference of explicit encoding.

Table 3-d Explicit vs. Implicit Encoding of Temporal Advancement Across Levels

	Low	Medium	High	Native
explicit encoding	37%	49%	56%	76%
implicit encoding	63%	51%	44%	24%

At the low level, learners prefer implicit marking. At the medium level, they do not show clear preference of either explicit or implicit encoding. At the high level, they show clear preference of explicit encoding, as native speakers of Chinese do.

(ii). Steady increase in reliance on both adverbials and perfective particle *le*

Table 3-e Use of Adverbials and Perfective *le* in Foreground Across Levels

	Low	Medium	High	Native
adverbial	32%	42%	45%	67%
perfective <i>le</i> alone	5%	7%	11%	9%
adverbial plus <i>le</i>	1%	3%	6%	16%

While overall learners' reliance on explicit encoding increases across proficiency levels, both their use of adverbials and their use of perfective viewpoint particle increase in frequency.

The Use of Adverbials

The use of adverbial expressions of temporal advancement by adult learners is summarized in Table 3-f.

Table 3-f Use of Temporal Adverbials in Foreground by Learners

	total of Adv.	adverbial alone			adv.+le
		All alone	All Type1	All Type 2	
L1:	7	7	7 0	0	0
L2:	7	7	5 2	0	0
L3:	13	12	10 3	0	1
L4:	5	5	5 0	0	0
L5:	2	2	1 1	0	0
L6:	7	7	7 0	0	0
L7:	5	5	4 0	1	0
Ave.	6.57	6.43			
M1:	3	3	2 1	0	0
M2:	8	6	3 3 2	0	2
M3:	15	14	6 4 3 1 1	0	1
M4:	23	21	14 8 1	0	2
M5:	7	7	6 1	0	0
M6:	18	17	12 6	0	1
M7:	11	9	7 4	0	2
M8:	14	14	6 4 3 1	0	0
Ave.	12.38	11.38			1
H1:	7	7	2 2 1	2	0
H2:	13	13	10 1 1	1	0
H3:	10	7	5 3 1 1	0	3
H4:	22	17	13 7 1 1	0	5
H5:	15	13	15	0	2
H6:	8	8	6 1	1	0
Ave.	12.5	10.83			1.67

First of all, all the learners, regardless of their proficiency levels, used Type A11 adverbials exclusively. In this regard, adult learners resemble native speakers, because native speakers also rely almost exclusively on this type of adverbials, except that native speakers did use temporal adverbials of other types such as A12 and A13. Not only are the temporal adverbials learners used confined to the type of A11, they are also not as varied as those used by native speakers. For example, none of the twenty-one learners used more than 4 different temporal adverbials in the foreground, except for medium-level learner 3, who used five, while every native speaker (except R) used at least five different temporal adverbials. Therefore, learners used many fewer temporal adverbials than native speakers did, and the expressions they used are less varied. Meanwhile, low-level learners used less varied expressions than medium-level and high-level learners. Finally, learners did not start to acquire A11 Type 2 adverbials until at high level.

- Temporal Adverbials Used by Both Native Speakers and Learners

Type A11 – Subtype 1

suoyi "so"

(165)

63 *keshi neige sange nan haizi kandao*

but that three boy child see

But that boy saw

64 *ta meiyou tade maozi,*

he not have his hat,

he lost his hat,

65 *suoyi ta jiao ta.*

so he call him

so he called him. (Low-level 1)

ranhou “afterwards”

(166)

43 *(ta) likai le,*

(he) leave LE

He left,

44 *ranhou ta* "riding his bicycle".

then he "riding his bicycle"

then he was back on his bike. (Low-level 5)

jiu "then"

(167)

28 *ta kan shuiguo,*

he look fruit

He saw the fruit,

29 *jiu na yige,*

then take one

so he took one,

30 *jiu zou zou.*

then walk walk

and then he kept walking. (Low-level 4)

zai “again”

(168)

85 *haiyou bang ta na qilai shuiguo*

in addition help him pick up fruit

He also helped the boy pick up the fruit,

86 *zai fang dao lanzi li.***again** put to basket inand put them **back** into the basket. (Medium-level 8)*houlai* “later”

(169)

86 *houlai you sange nan haizi***later** exist three boy child**Later** three boys87 *guolai bangmang.*

come over help

came over to help. (High-level 3)

benlai ... (houlai) “at first ... then”

(170)

27 *benlai ta yao zhi yao na yige shuiguo,***at first** he want only take one fruit**At first** he only wanted to take one pear,28 *keshi ta deng yixia kan neige shushang de ren.*

but he wait one moment look that tree on DE person

but he hesitated for a moment, looking at the farmer in the tree.

29 *ta mei kan dao ta,*

he not see him

The farmer did not see him,

30 *suiyi ta ba neige shuiguo suoyou de shuiguo na qu, na zou.*

so he BA that fruit all DE fruit take away

so he took away the whole basket. (Medium-level 3)

Type A11 – subtype 2

...*yihou/zhihou* "after..."

(171)

3 *ta na pingguo yihou,*

he pick apple **after**

After he picked an apple,

4 *ta xia shu.*

he down tree

he came down the tree. (Low-level 7)

- Temporal Adverbials Used Only by Learners

Type A11 – subtype 1

yihou (which should be *ranhou* "after that")

(172)

31 *ta fang shuiguo zai*

he put fruit At

He put the fruit

33 "basket" *de limian*,

basket DE inside

in the basket,

34 *yihou, ta zai shang shu.*

afterwards, he again up tree

and then he climbed back into the tree. (Low-level 2)

Since an adverbial such as *yihou* encodes temporal relations, it needs a reference point, which is the event time of the previous situation "put the fruit in the basket". There are two possibilities that the previous event can serve as the reference point. One possibility is to use *yihou* at the end of the previous clause.

(173)

31 *ta fang shuiguo zai*

he put fruit At

After he put the fruit

33 "basket" *de limian yihou*,

basket DE inside after

in the basket,

34 *ta zai shang shu.*

he again up tree

he climbed back into the tree.

The other possibility is to use an anaphoric adverbial *ranhou*, which literally means "after that" or "afterwards".

(174)

31 *ta fang shuiguo zai*

he put fruit At

He put the fruit

33 "basket" *de limian*,

basket DE inside

in the basket,

34 *ranhou, ta zai shang shu.*

then, he again up tree

and then he climbed back into the tree.

zai yi ci "once again"

(175)

20 *na hao le,*

pick finish LE

When he filled his pocket,

21 *ta pao xialai zai yici.*

he run down **once again**

he ran (climbed) down the tree **again**. (Low-level 3)

Native speakers prefer to use *zai* instead of *zai yici*. Although they could both encode temporal succession, *zai yici* "once again" is narrower in meaning, because it means do something one more time. However, *zai* "again" can mean doing another thing after doing one thing as well. Besides, both of these adverbials should appear before the verbs in Chinese, as (176) shows.

(176)

20 *na hao le,*

pick finish LE

When he filled his pocket,

21 *ta zai yici pao xialai.*

he once again run down

he came down the tree again.

Type A12

mashang "immediately, right away"

(177)

43 *zai tade pangbian you sange biede xiao hai,*

at his side exist three other little boy

There were three other boys nearby.

44 *tamen mashang bang ta ba shuiguo fang zai penzi limian.*

they **immediately** help him BA fruit put at basin in

They **immediately** helped him put the fruit back into the basket.

(Medium-level 3)

- Temporal Adverbial Expressions Transferred from L1

“an”, “and”, “and then”

(178)

54 “an” *bang ta ba lan de shuiguo fang zai tade chezi,*

and help him BA basket DE fruit put at his bike

and helped him put the basket back onto the bike,

55 “and then” *sange nan haizi zou.*

and then three boy child leave

and then the three boys walked off. (Low-level 7)

The Use of *le*

The use of *le* by learners in the foreground will be discussed in detail in the next chapter.

Only the pattern of relative frequency by learners has been presented in Figure 7.

(iii). **Decreasing reliance on discourse/pragmatic encoding**

The distinction between explicit encoding and implicit encoding is crisscrossed by another distinction, the distinction between semantic encoding and pragmatic encoding. Among means of explicit encoding of foreground, the use of adverbials relies on the temporal feature inherent in their lexical meanings, while the use of perfective viewpoint relies on the grammatical meaning of the perfective particle in question. In both cases the encoding of temporal relations is semantic in nature. However, among the implicit means of encoding foreground, sometimes semantic information alone is not sufficient. For example, whether temporally unbounded situations can legitimately appear in the

foreground is contingent upon certain contextual information which independently establishes that they move narrative time.

Table 3-g Implicit Encoding of Temporal Advancement Across Levels

	Low	Medium	High	Native
implicit encoding	63%	51%	44%	24%
-----	-----	-----	-----	-----
telic	45%	38%	33%	18%
pragmatic/contextual	19%	13%	11%	5%

As learners' overall reliance on implicit encoding decreases, so does their reliance on telic situation and contextual support, respectively. In other words, their reliance on discourse pragmatics decreases.

- Reliance on telicity

For a telic situation, in the absence of explicit encoding, to encode temporal advancement, one has to rely on the Principle of Natural Order. Since a telic situation is temporally bounded by itself, it can naturally be interpreted as having past tense. However, whether it encodes a narrative event depends on whether it follows the previous narrative event in time. Unless otherwise stated and without contradictory contextual information, the Principle of Natural Order will dictate that a telic situation is in the foreground.

- Contextual support

Sometimes the Principle of Natural Order is not enough for a situation to be interpreted as part of foreground. For example, an atelic situation or a stative situation is

temporally unbounded and under normal circumstances cannot form a sequence with the previous events. As we have found in Section One of this chapter, specific contextual information is needed if such a situation is interpreted as belonging to the foreground. It is found that for native speakers, whenever a temporally unbounded situation is to be interpreted as foreground, context indicates that it does not overlap the previous event but rather follows it, and together they form an expectancy chain. I will turn to cases where learners used temporally unbounded situations to encode foreground events and try to determine what contextual factors licensed such usage.

At the low level, learners rely on contextual support alone 19 percent of the time. All seven learners from the low proficiency level encoded 28 foreground situations relying on contextual information. Half of these situations follow the previous event temporally and form an expectancy chain with it. However, the other half do not and could cause ambiguity and difficulty in understanding. The Pear Story video shows a boy came by on a bike. He saw the pears in the basket and the farmer working in the tree and decided to take some pears with him. A low-level learner described the episode in (179).

(179)

28 *yihou, neige ren zai shushang xialai,*

then, that person at tree on down come

Afterwards a person came down the tree.

31 *ta fang shuiguo zai*

he put fruit at

He put the fruit

- 33 "basket" *de limian*,
 basket DE inside
 in the basket,
- 34 *yihou, ta zai shang shu*
 then he again up tree
 then he climbed back onto the tree.
- 44 *you yige xiao haizi, ta kan shuiguo*,
 exist one little boy he look fruit
 A little boy saw the fruit.
- 45 *ta yao na zhexie shuiguo*
 he want take these fruit
 He wanted to take the fruit.
- 46 *suiyi, ta na yige "basket"*.
 so he take one basket
 So, he took one basket. (Low-level 2)

Clauses 44 and 45 in episode (179) are very ambiguous and could lead one to the interpretation that the boy had been watching for a while because he wanted to steal some fruit, situations that should be relegated to the background. That such interpretation could arise is because the situations referred to by *kan* "look" and *yao* "desire, want" are both temporally unbounded and are normally understood to overlap the previous event encoded in clause 34. In addition, there is no contextual information to indicate that the boy just came to the scene and therefore it is hard to interpret the situation in clause 44 as

following that in 34. And once the situation in clause 44 is interpreted as ongoing rather than arising from the circumstances, it does not form an expectancy chain with the situation in clause 45. An expectancy chain that makes sense in such a context would be "see food ... want food". There is indeed some interclausal relationship encoded between the two situations in clause 44 and 45 when both are interpreted as temporally unbounded. However, it is not a sequence of actions which characterizes an expectancy chain but rather a causal relation. The interpretation would be "he had been watching" because "he wanted to have the fruit". It is clear from the above analysis that, in the absence of explicit encoding, temporally unbounded situations intended to be narrative events could be interpreted as belonging to the background but clear contextual information, which is culturally appropriate, is necessary to encode them as foreground.

When we look at the clauses that encode the above-cited situations, we found that except for one clause that contains a modal verb *yao* "desire, want", 13 of the 14 clauses contain verbs such as *na* "carry, take" (2 tokens), *kan* "look" (10 tokens), *zhao* "look for" (1 token), whose combinations with a verbal complement are more commonly used by native speakers, such as *na qilia* "pick up", *na zou* "take away", *kanjian* "see", and *zhaodao* "find". It is possible that learners have not learned the verbal compounds consisting of a verb and a verbal complement. However, we cannot rule out the possibility of L1 transfer.

Since Chinese does not have the grammatical category of tense, past tense reference in story-telling is expressed through other means. Past tense can be set in a frame at the beginning of the story with specific temporal expressions such as *ji tian qian* "the other

day" or the formulaic expression *you yitian* "once" or *congqian* "once upon a time". Or with the understanding that since what is being told as part of a story must be past events, past tense interpretation can be left to the story-telling context. Once such a frame is established, there is no need to mark each individual main verb with past tense reference, the usual practice in English. Therefore, the choice of main verbs in the episode of Ex. 6-15 could be a direct result of L1 transfer.

In English, a main verb in the foreground is obligatorily marked with past tense morpheme *-ed*. There is the exception of historical present. However, because of the contrastive value of perfective form and imperfective form, a verb in its uninflected form still indicates it is temporally bounded and thus has past tense interpretation. A conventional implicature of past tense in English is that the situation referred to by the verb ceased to be true unless otherwise stated, even if the verb refers to a temporally unbounded situation, such as activities and states. World knowledge tells us that an activity such as *kan* "look" does not go on forever and the state of "desiring food" does not hold forever either, and a past tense marker normally implies that the situation does not hold at the time of story-telling event, or speech time. Imagine a learner tags each foreground main verb in Chinese with an *-ed* in his mind, then all the 14 temporally unbounded verbs used by learners to encode foreground events are actually to be understood as having past tense interpretation, so *kan* "look" actually encodes "looked" and *yao* "wanted". Since they are to be understood as having past tense, they give rise to the implicature that they ended somehow by the time of the speech moment. With their final endpoints pragmatically supplied, they actually become temporally bounded with

the help of such implicature. Understood in this way, the situation in clause 44 of Ex. (179) does not have to overlap the previous event. As a matter of fact, it is better to interpret it as an event following it. Similarly, the situation in clause 45 can be interpreted as following that of 44. It is still possible to interpret 44 and 45 as causal, but at least an expectancy chain formed by 44 and 45 makes sense. Finally, although the above suggested tagging by overt grammatical means is not available in Chinese, just as with historical present in English, past tense reference can still be attributed to the verb.

As the learners progressed from low to medium proficiency level, their reliance on contextual support decreased from 19 percent for low-level learners to 13 percent for the medium-level learners. In addition, more situations so encoded follow the previous events and form expectancy chains as is the case with native speakers in similar circumstances. Altogether twenty-nine temporally unbounded situations are interpreted as part of the foreground. In comparison to low-level learners, only six of them do not have contextual support and do not form expectancy chains with previous events. Among the six verbs, four are *kan* "look", one is *na* "carry, take", and one is *juede* "feel".

At the high level, learners' reliance on contextual support continued to decrease, as only 11 percent of the foreground clauses needed contextual information to be correctly interpreted, continuing to approach the level of the native speakers - 5 percent. Meanwhile more and more clauses so encoded form expectancy chains. Among the 19 temporally unbounded situations which are interpreted as in the foreground, only two do not have contextual support and do not form expectancy chains with previous events. They both contain the verb *kan* "look".

Discussion

The above findings confirm some of the findings of previous research on second language acquisition of temporality. In particular, three of the six tendencies observed by Dietrich et al (1995) with adult second language learners in untutored learning environments are confirmed in this study. The type of data used in this study does not allow either confirming or disconfirming of the other three tendencies. The three having been confirmed are (1) from implicit to explicit; (2) from lexical to grammatical; and (3) from AFTER to BEFORE.

From Implicit to Explicit

Dietrich et al (1995) found that many of the temporal relations are left to context and to inferences rather than being made explicit by second language learners, especially when their linguistic resources in the target language are limited. There is no reason to mark temporal relations by explicit means such as by the use of adverbial "then" if the discourse Principle of Natural Order works well. But they mark temporal relations more often as they grow more proficient in the target language. I found similar results in this study. From the low level up to the high level, learners exhibited a decreasing reliance on implicit encoding, for example by relying on the temporal feature of the situation or with the help of context, and with an increase in the use of explicit means of marking temporal advancement, whether the explicit means is adverbials or perfective viewpoint markers. The development is clearly from the implicit to the explicit.

From Lexical to Grammatical

When a temporal relation is not left implicit, it can be expressed either by a tense/aspect morpheme or by adverbials such as "after" or "before". Dietrich et al (1995) found that lexical means come first and grammatical means are slowly developed. In this study, I found similar results. The general trend is that learners use more and more explicit means of encoding temporal advancement as they gain proficiency, whether the explicit means is adverbials or grammatical viewpoint markers. Although learners at all stages favor of adverbials over perfective viewpoint markers, the ratio of perfective viewpoint to adverbials increases across the proficiency levels (Table 3-h). In other words, the tendency is from lexical means to grammatical means.

Table 3-h Ratio of Perfective Viewpoint Marker to Adverbials

Ratio (perfective : adverbial)	Low	Medium	High	Native
	6:32	10:42	17:45	25:67
	1:5.3	1:4.2	1:2.6	1:2.7

The reason that we did not see more frequent use of grammatical than adverbials means, even at the high proficiency level, is because the native speakers themselves use more adverbials than perfective viewpoint markers.

From AFTER to BEFORE

As I have explained in the previous section, there are few expressions of temporal relation BEFORE in comparison to the various types of expressions for AFTER in the Pear Stories told by native speakers of Chinese. Some like Tai (1993) argued that iconicity plays an important role in the way events are presented in Chinese narrative, so

that the discourse Principle of Natural Order is preserved whenever it can be. The reason that no learners encoded temporal relation of BEFORE therefore might be because there is no such expression in the input. The counterpart of "before" in Chinese is ...*yiqian/zhiqian*. However, this relation can be conceptualized in a different way and encoded with another expression ...*de shihou* "when/while". Instead of saying "the next morning, he called off the appointment with his dentist before he left for his own office", the original order of events is preserved when a native speaker of Chinese reports "the next morning he first called off his appointment and then left for his own office". If the temporal relation of BEFORE has to be encoded somehow, in Chinese the preferred way is to change it to temporal relation WHEN by saying "the next morning while he has not left for his office he called off his appointment with his dentist".

There are four interclausal relations that can be characterized as BEFORE in the Pear Stories told by native speakers. However, none of them are encoded in the form of "before". Instead, all used the surface form of "when". The following example is taken from Narrative M.

(180)

31.1 *ranhou*,

afterwards

After that

31.2 *tamen jiu zou dao neige zhai shuiguo de ren neige difang.*

they then walk to that pick fruit DE person that place

They came to the place where the farmer had been picking fruit.

32.1 *Ta hai meiyou zou dao de shihou,*

he still not walk to **DE time**

Before he (they) walked to the place,

32.2 *neige zhai shuiguo de ren jiu xialai le.*

that pick fruit DE person then down come LE

the farmer had already come down the tree. (Narrative M)

Not only does Chinese use ... *de shihou* “when/while” to encode BEFORE, it uses the structure for a different information purpose. In the above example, the situation “the farmer came down the tree” in clause 32.2 is located before “the boy walked to where the farmer had been working” in 31.2 and overlaps “the boy had not got to where the farmer had been working” in 32.1. However, clause 32.2 is presented as a Band 3 clause, because the situation it refers to is out of sequence. In contrast, such a situation in English is located in the foreground. In the example “the next morning, he called off the appointment with his dentist before he left for his own office”, that he called off the appointment is presented as a foreground event. Clause 32.2 could be elevated to the status of a foreground clause if clause 31.2 is left out. However, while the use of a subordinate clause “before he left for his own office” in English commits one to the proposition that he actually did leave his house for office sometime later on, the use of ... *de shihou* “while” alone in Ex. (180) to introduce a foreground clause does not necessarily imply that the three boys actually did walk to the place where the farmer had been working, a proposition that can only be established by the context. In example (180), it is the previous clause 31.2 that warrants such an implication.

It seems that learners are aware of this general disfavoring of encoding the temporal relation of BEFORE in the Chinese language, as none of the twenty-one learners ever used ... *yiqian/zhiqian*, the Chinese equivalents of “before”, when telling the Pear Story. Some of them, however, did pick up the alternative way of encoding BEFORE using the ... *de shihou* “while”, which is occasionally used by the native speakers. The only two instances of such usage are provided by a low-level learner and a medium-level learner.

(181)

51 *Ta jiu zou yi zou qu pao qu le.*

he then walk once walk go run go LE

So he walked and ran away.

52 *Na ta qu bu yuan de shihou,*

so he go not far **DE when**

He **did not** run too far down the road **when**

53 *you yige nu haizi,*

exist one female girl

a little girl,

55 *jiaotache guo lai.*

bike over come

came by on a bike. (Low-level 3)

(182)

103 *suoyi tamen yizhi zou dao neige shu de pangbian.*

so they all the way walk to that tree DE side

So they walked all the way down to tree.

104 *keshi tamen zoulu de shihou*

but they walk **DE while**

But while they were walking,

105 *hai mei dao,*

still not arrive

before they arrived,

106 *neige nan haizi zai shu limian*

that boy child at tree in

the boy (farmer) up in the tree,

107 *neige shuiguo ta qu lou xia.*

that fruit he go stairs down

that fruit, he came down the tree. (Medium-level 4)

The clauses that encode BEFORE using ... *de shihou* in Ex. (182) are clause 104 and 105. Just as native speakers, this learner presented the situation “the boy (mistaken identity, which should be the farmer) came down the ladder” as a Band 3 clause, located before the situation “the boys walked to the tree”, which is encoded in clause 103. The clause that encodes BEFORE in Ex. (181) is clause 52.

From Pragmatic to Semantic

In addition to the above three tendencies observed, there is a fourth tendency that is closely associated with the tendency from Implicit to Explicit, namely the tendency

towards less and less reliance on discourse-pragmatics. There are two sides to the reliance on discourse-pragmatics. One side is the reliance on the Principle of Natural Order when the situation is temporally bounded but implicitly encoded. As learners progress from lower proficiency to higher proficiency, their reliance on this principle continues to decrease. The other side is the reliance on contextual support when the situation is implicitly encoded and temporally unbounded. Native speakers seldom resort to contextual support to encode temporal advancement. Learners, in particular at the lower proficiency, seem to rely more on this strategy. In addition, they have not fully learned the constraints on such support as a resort; that is, they have not learned that the situation in question has to form an expectancy chain with the previous event. However, as they progress to higher proficiency, learners' reliance on contextual support decreases and approximates that of the native speakers, and more and more of the clauses in such circumstances constitute part of an expectancy chain.

Background

The results for temporal encoding in the background by learners are presented in Table 4. For the purpose of comparison, encoding of background by native speakers of Chinese as a group is included in the bottom of the table.

Findings

Low-level learners strongly prefer implicit encoding of temporal overlap (85%) to explicit encoding (15%). If they do choose to explicit encoding, they prefer adverbials (13%) to imperfective viewpoint markers (about 2%). When they choose implicit

Table 4 Encoding of Background by Learners

	semantic encoding							pragmatic encoding			
	explicit encoding				implicit encoding			T	[+telic]	le	la
	T	A21/A22	zhe/zai	adv.+impf.	T	[+stative]	[-telic]				
L1: 17	0	0 0	0 0	0	17	9	7	1	1	0	0
L2: 30	5	2 3	0 0	0	25	16	7	2	2	0	0
L3: 25	6	6 0	0 0	0	19	10	4	5	3	1	1
L4: 17	2	0 2	0 0	0	15	6	8	1	0	1	0
L5: 15	1	0 0	0 0	1	14	9	4	1	1	0	0
L6: 25	3	1 0	0 2	0	22	12	8	2	2	0	0
L7: 10	4	2 2	0 0	0	6	1	3	2	2	0	0
TL: 139	21	11 7	0 2	1	118	63	41	14	11	2	1
%	15	13	0 1	1	85	45	30	10	8	1	1
M1: 20	2	2 0	0 0	0	18	13	4	1	1	0	0
M2: 14	2	2 0	0 0	0	12	5	5	2	2	0	0
M3: 13	2	1 1	0 0	0	11	7	2	2	2	0	0
M4: 54	10	4 6	0 0	0	44	32	6	6	6	0	0
M5: 17	5	2 3	0 0	0	12	5	3	4	2	1	1
M6: 30	5	1 2	0 2	0	25	18	4	3	2	1	0
M7: 22	2	0 0	0 2	0	20	15	1	4	2	2	0
M8: 35	7	0 3	0 3	1	28	15	8	5	4	1	0
TM 205	35	12 15	0 7	1	170	110	33	27	21	5	1
%	17	13	3	1	83	54	16	13	10	2	1
H1: 20	7	4 0	1 0	2	13	8	1	4	3	1	0
H2: 25	10	7 2	0 1	0	15	9	3	3	1	0	2
H3: 44	9	6 2	1 0	0	35	19	9	7	6	0	1
H4: 44	8	2 3	0 guo	2	36	20	10	6	4	2	0
H5: 31	2	1 1	0 0	0	19	13	1	5	4	0	1
H6: 26	7	3 2	2 0	0	19	13	1	5	4	0	1
TH: 190	43	23 10	4 2	4	147	82	33	32	23	4	5
%	23	18	3	2	77	43	17	17	12	2	3
TN: 519	236	98 26 1	71 20 1	19	283	174	46	63	26	26	11
	45	24	18	3	55	33	10	12	5	5	2

encoding, they prefer to rely on the atelic or stative feature of the situation, as 85 percent of all the background clauses are so encoded, and only about 10 percent of background clauses need contextual support.

Table 4-a Repertoire of Encoding Temporal Overlap by Low-Level Learners

Explicit encoding	15%
adverbial	13%
impf: <i>zhe/zai</i>	1%
adv.+impf	1%
Implicit encoding	85%
-telic/+stative	75%
contextual/pragmatic	10%

Medium-level learners also clearly prefer implicit marking (83%) to explicit encoding (17%). And like low-level learners, among the explicit encoding devices, they prefer adverbials (13%) to imperfective markers (about 4%). Among the implicit encoding devices, they prefer temporally unbounded situations such as atelic and stative situations (70%) to contextual support only (13%).

Table 4-b Repertoire of Encoding Temporal Overlap by Medium-Level Learners

Explicit encoding	17%
adverbial	13%
impf: <i>zhe/zai</i>	3%
adv.+impf.	1%
Implicit encoding	83%
-telic/+stative	70%
contextual/pragmatic	13%

High-level learners also show clear preference of implicit encoding (77%) to explicit encoding (23%). Among the explicit encoding devices, high-level learners prefer adverbials (17%) to imperfective viewpoint markers (5%). Among implicit encoding devices, they prefer situational feature (60%) to contextual support alone (17%).

Table 4-c Repertoire of Encoding Temporal Overlap by High-Level Learners

Explicit encoding	23%
adverbial	18%
impf: zhe/zai	3%
adv.+impf	2%
Implicit encoding	77%
-telic/+stative	60%
contextual/pragmatic	17%

Certain developmental patterns in the encoding of background are discernible from the above results.

(i). Steady increase in reliance on explicit encoding and decrease on implicit encoding

As they did in the foreground, learners showed growing use of explicit encoding in the background and decreasing use of implicit encoding in the background.

Table 4-d Explicit vs. Implicit Encoding in Background Across Levels

	Low	Medium	High	Native
explicit encoding	15%	17%	23%	45%
implicit encoding	85%	83%	77%	55%

While native speakers of Chinese show a slight preference of implicit encoding to explicit encoding, learners seem to show very clear preference of implicit encoding. However, as learners progress, their reliance on implicit encoding decreases and the trend is to approximate the native speakers in this regard.

(ii). **Growing use of both temporal adverbials and imperfective markers**

Table 4-e Use of Adverbials and Imperfective Viewpoint Markers

	Low	Medium	High	Native
adverbial	14%	14%	20%	27%
impf. <i>zhe/zai</i>	2%	4%	5%	21%

As their overall reliance on explicit encoding increases, so does learners' reliance on adverbials and imperfective markers. However, the increase across proficiency levels is not very significant, and there is considerable distance from native-like use of explicit means of encoding in the background.

The Use of Adverbials in the Background

- The temporal adverbials of overlap used by both L1 speakers and L2 learners

Type A21

... *de shihou* "when, while"

(183)

74 *na ta zou de shihou,*

so he walk DE **when**

While he (they) was (were) walking,

75 *neige sange nan haizi kandao yige maozi.*

Those three boy see one hat

the three boys saw a hat. (Low-level 3)

... *yihou* "after"

(184)

36 *na shoushi qilai yihou,*

so put away **after**

When they finished picking up the pears from the ground,

37 *bang ta ba jiaotache zhan qilai.*

help him BA bike stand up

they helped him put up the bike. (High-level 2)

yinwei "because"

(185)

43 *suoyi yinwei neige nan hai kandao nuhai,*

so **because** that boy see girl

Because the boy saw the girl,

44 *suoyi ta pengdao yige shitou.*

so he bump to one rock

he stumbled over a rock. (Medium-level 6)

Type A22

congqian/yiqian ... xianzai "previously ... now"

(186)

57 *congqian nanren you sange lanzi,*

previously man have three basket

Previously the farmer had three baskets,

58 *xianzai, meiyou sange lanzi.*

now, not have three basket

but **now** he did not have three anymore. (Low-level 4)

zheng "right in the middle of"

(187)

58 *na ta kandao zhe sange xiao haizi,*

so he see these three little boy

So he saw these three boys,

59 *tamen zheng zai chi zheige shuiguo.*

they **right now** ZAI eat this fruit

who were eating this kind of fruit. (High-level 1)

yibian ... yibian "while ... while"

(188)

57 *tamen yibian zoulu yibian chi shuiguo*

they **while** walk **while** eat fruit

They, eating the fruit and walking the same time,

58 *guo neige shushang de na shuiguo de ren.*

pass that tree on DE that fruit DE person

passed the tree where the farmer had been picking fruit. (Medium-level 3)

ganggang "just, just now"

(189)

99 *suoyi neige xiaohaizi tamen zou neige lu.*

so that boy they walk that road

So those three boys walked on that road.

100 *ta ganggang tou neige shuiguo,*

he **just now** steal that fruit

The boy they just met had stolen the fruit.

101 *tamen zai shou limian you neige shuiguo.*

they At hand in have that fruit

They each had a fruit in their hands. (Medium-level 4)

- Adverbials of temporal overlap used only by learners

Type A22

mei(yi)ci "each time"

(190)

14 *suoyi meici ta qu ta xialai*

so **each time** he go he down come

So **each time** he came down the tree,

15 *ta fang zai neige baozi.*

he put At that basket

he put the fruit in the basket. (Medium-level 4)

Low-level learners used adverbials of temporal overlap least often. Learner 1 did not use any. Learner 5 and Learner 6 used an adverbial only once. Learner 3 used the same expression ... *de shihou* six times. Learner 4 used two different adverbials, each once. This is not to deny individual difference, as Learner 7 used four different adverbials each once and Learner 2 used four different ones for five times.

Medium-level learners seem to use more adverbials with slightly more variety. However, from the low level to the medium level, learners' use of adverbials of temporal overlap has not changed very much. Learner 7 did not use any. Learner 1 and Learner 2 both used the same adverbial ... *de shihou* twice. Learner 3 used two expressions, each once. Learner 6 used three different expressions, each once. Learner 8 used four different adverbials, each once. Learner 5 used five different ones for five times. Learner 4 used four different ones for 10 times.

Learners at the high level clearly increased their use of adverbials of temporal overlap. Except for Learner 5, who only used two different adverbials each once, all the other learners used at least three different such expressions. Therefore, in spite of individual differences, overall as they progressed in proficiency learners used more adverbials of temporal overlap in the background and the expressions they chose are more varied. However, there is still a noticeable gap between even the high-level learners and the native speakers in terms of the use of adverbials in the background. Not only do native speakers use more, they tend to use more varied expressions, sometimes as many as 7 different such expressions, for example in Narrative G. Overall, as a group, native speakers used more varied temporal adverbials.

The Use of Imperfective Viewpoint Markers

What is striking is the observation that none of the low-level learners or medium-level learners used one of the imperfective markers, durative *zhe*, at all. All the imperfective markers they used are the progressive *zai*. However, at the high level, learners started to use both *zai* and *zhe*, and like native speakers they use more *zhe* than *zai*. This shows that *zai* is acquired before *zhe*. Even though learners used more and more imperfective viewpoint markers in the background from the low level to the high level, their use of such markers is not as nearly as often as native speakers. Even at the high level, they used imperfective markers for a mere 3 percent of all the background clauses, in comparison to the 18 percent by the native speakers. In contrast to their behaviors in the foreground where learners progressed fast in approaching native speakers in terms of their use of perfective viewpoint marker, learners seemed to progress slowly in learning to use the imperfective viewpoint marker in the background. This certainly gives support to the finding in both first language acquisition (Erbaugh 1992) and second language acquisition (Wen 1997) that perfective *le* is acquired before other viewpoint markers such as *zai* and *zhe*.

(iii). **Decrease in reliance on implicit encoding**

Table 4-f Implicit Encoding of Temporal Overlap Across Levels

	Low	Medium	High	Native
atelic/+stative	75%	70%	60%	43%
contextual/pragmatic	10%	13%	17%	12%

As learners' overall reliance on implicit encoding decreases, so does their reliance on unbounded situations. However, interestingly there is a slight increase of reliance on contextual support.

Reliance on Unbounded Situational Feature

Learners most often rely on the unbounded feature of the situation to encode temporal overlap for background purpose. As a matter of fact, their reliance on this means remains so heavy that, even at the high level, they still choose to encode background with this means more than half of the time. The reason could be the input they got, as it is also the most often used means of encoding background by native speakers.

Reliance on Contextual Support

Interestingly, in the larger picture where learners used implicit encoding less and less often, and while their reliance on unbounded situational feature saw continuous decrease across proficiency levels, their reliance on contextual support actually saw an increase. This trend in development that is against all the other developmental tendencies deserves special attention.

In the previous section, I suggested that bounded situations receive background interpretation with four kinds of contextual support. In particular, there has to be independent contextual information to indicate that the situation is simultaneous with another one, out of sequence, expository of a general procedure, or simply repetitive. Combing through the Pear Stories told by the learners, I found that the most of the clauses that contributed to the increase in the number of temporally bounded situations

implicitly encoded for background seem to belong to the types of Band 3 and Band 4 (See Table 4-g).

Table 4-g Distribution of Temporally Bounded Situations Across Background

	B2	B3	B4	B5	B6	B7
L1: 14	2	4	3	0	0	5
M: 27	2	11	8	0	0	6
H: 32	2	13	10	0	0	7
N: 63	12	25	11	0	4	11

However, we cannot draw the conclusion that learners tend to encode out of sequence events and expository situations with implicit means of encoding before we decide the total number of Band 3 and Band 4 situations the learners reported and how many of them are encoded explicitly vs. implicitly (see Table 4-h).

Table 4-h Percentage of B3 and B4 clauses expressed by temporally bounded situations

	Low	Medium	High	Native
B3	44.4%	68.8%	85.7%	62.5%
B4	8.8%	8.99%	16.9%	13.8%

Learners are aware that temporally bounded situations can appear in the background, relying on contextual support. However, in their efforts to learn the native speakers' norm, learners seem to have overshot the target. At the low level, it is clear that learner do not use as many implicitly encoded temporally bounded situations for either Band 3 or Band 4 clauses. However, at the medium level, learners not only caught up with but

actually surpassed native speakers in terms of the percentage of temporally bounded situations in Band 3 clauses. Having arrived at the high level, they also overtook native speakers in their use of such situations in Band 4 clauses. It is this kind of overshooting the target that explains learners' relative increase in reliance on contextual support in the background, although their overall reliance on implicit encoding actually saw a decrease.

Discussion

From Implicit to Explicit

Although even the high-level learners clearly prefer implicit encoding to explicit encoding, the tendency is from implicit to explicit, as the reliance on explicit encoding continues to grow from low-level to high-level proficiency. Overall native speakers still prefer implicit encoding in the background slightly over explicit encoding.

From Lexical to Grammatical

Table 4-i Ratio of Imperfective Viewpoint Markers to Adverbials of Temporal Overlap

	Low	Medium	High	Native
ratio (<i>zhe/zai</i> : adv.)	1:7	1:3.5	1:4	1:1.3

Although learners' acquisition of imperfective viewpoint markers seems to be slow, the general trend from lexical to grammatical observed in the foreground is discernible in the background as the ratio of imperfective viewpoint markers to adverbials of temporal overlap still sees an increase across the proficiency levels.

From AFTER to BEFORE

Background is not characterized by temporal relations of AFTER or BEFORE.

Therefore, the pattern observed in the foreground is not applicable in the background.

Towards Less Reliance on Discourse-Pragmatics

Because of over-emulating the native speakers, the learners show increasing reliance on discourse-pragmatics in the background. The interesting question then becomes why their reliance on discourse pragmatics shows such difference between the foreground and the background. Such difference results from the fact that in the foreground there is a constraint in addition to the requirement that there is contextual support, i.e. a situation has to form an expectancy chain with the previous event. However, in the background, as long as there is contextual information indicating temporal overlap, it can license such implicit encoding, no matter the situation is encoded in a Band 2 or Band 7 clause.

SUMMARY

It has been shown that native speakers have available a repertoire of devices for encoding temporality in narrative discourse. However, they show different preferences in encoding foreground and background. In the foreground they show predominant preference of explicit encoding. However, in the background they slightly favor implicit encoding. In both discourse contexts, they disfavor the use of grammatical viewpoint markers.

Adult learners have their own repertoire, although in comparison to native speakers such repertoires are smaller and contain less varied items. Clear developmental patterns are found in learners' acquisition of temporality in narrative discourse. As they gain

proficiency in the target language, they grow from preferring implicit encoding to preferring explicit encoding, their use of grammatical means increases against lexical means, and their reliance on the discourse context decreases. These universal developmental patterns are observed in both the foreground and the background. What is found in this study highlights the role of the input learners receive, as most of the developmental tendencies reflect grammar and language use by the native speakers. However, there is evidence that L1 transfer could play a role in learners' acquisition of some temporal properties of the target language. Finally, factors in the learning process such as learners' over-emulation of native speakers could also influence their performance.

CHAPTER V PERFECTIVE LE IN FOREGROUND: A FORM-TO-FUNCTION ANALYSIS

Up to now, I have demonstrated how native speakers of Chinese and adult learners of Chinese encode temporality in narrative discourse, throwing light on developmental patterns that show learners using more and more explicit means of encoding, grammatical encoding among them, in an attempt to approach native-like performance. Having explained how the function of temporality is mapped onto different linguistic forms, in this chapter I will attempt to show how a particular linguistic form is used to encode the function of temporality. The linguistic form chosen as the focus is the aspectual marker *le*. The reasons that *le* is chosen include that (1) *le* is the most frequently used aspectual form in Chinese (Smith and Erbaugh 2000) and the most frequently used form by children (Erbaugh 1992) and by adult second language learners (Yang et al 1999, 2000); that (2) there is a lot of controversy over the marker, much of which can be explained away if attention is given to the different use it is put to in discourse; and that (3) finally, although it is among the first emerging grammatical forms, adult learners even if in advanced stages (Yang et al 2000) maintain a consistent rate of errors.

Ideally, to explore the meanings of *le* in narrative discourse, both foreground and background should be examined. However, in view of the close association of perfective *le* and foreground, as a start, in this study I will explore the meaning of *le* only in the foreground.

Section One. THE VARIABLE USE OF LE BY CHINESE L1 SPEAKERS

The Previous Studies

There are two kinds of rules governing the use of perfective *le* by native speakers, categorical and variable rules. Categorical rules operate on a principle of YES or NO. When categorical rules apply, the aspectual particle in question must be used or it must not be used. However, when variable rules apply, the particle could be used but is not necessarily used. It is more likely to be used in certain contexts but less likely in other contexts. It is found that a discourse context, in particular, narrative context, prompts the application of variable rules regarding the use of perfective *le* (Chu and Chang 1987, Christensen 1994, Smith and Erbaugh 2000). Studies of the acquisition of aspectual particles such as perfective *le* have been suffering from inadequate description of the use of *le* in discourse. This chapter attempts to present a description of such usage with special focus on their application in the foreground of stories.

Li and Thompson (1981) identified four contexts where *le* CAN be used. Such events are bounded by

- (a) being a quantified event,
- (b) being a definite or specific event,
- (c) being inherently bounded because of the verb's meaning,
- (d) being the first event in a sequence.

Of the four contexts, only the last one has anything to do with discourse. Contrary to what many have believed, the above rule is not meant to be categorical. The contexts are proposed as strongly favoring the use of *le*.

Spanos (1979), in a survey of native speakers' intuition of their use of particle *le*, found that non-grammatical contextual and personal factors interact to determine the use

of *le* and that other features such as degree of redundancy and rhetorical effect are also possible factors. He concluded that there is no single rule governing the use of *le*.

Without belittling the significance of such a pioneering study, there remain some issues about his research that need to be addressed. First, the subjects were instructed to insert *le* if necessary or optional for 12 sentences from which all occurrences of *le* had been deleted. This leaves out those contexts where *le* is not allowed. Second, how truthfully native speakers' evaluation of their use of *le* reflects their actual use is questionable. However, the study does bring attention to the pragmatic side of the use of *le*.

Chu and Chang (1987) tackle the problem of the use of *le* from the perspective of discourse. Noticing the relatively low frequency of the occurrence of *le* in various types of discourse and the absence of *le* in various contexts where its presence is somewhat justified lead them to explore the discourse functions of verbal *le*. They hypothesized that

- (a) The verbal *le* is basically for making non-continuing factual actions/events.
- (b) In terms of discourse, the verbal *le* is basically for marking the peak in the event line.
- (c) In terms of sequencing of events, the verbal *le* serves to explicitly mark anteriority.

They found that *le* tends to occur with the last action/event verb in a sequence of two or more such verbs. They identified this function as marking the peak event of an event line. They compared this function to the clause-chaining function of a finite verb in Japanese followed by a sequence of non-finite verb forms. An interesting parallel of the function of *le* marking the focus of a series of events is found in Liu (1999).

The second discourse function identified by Chu and Chang (1987) is marking anteriority. In particular, the use of *le* marks explicitly cause-effect relations. Without such marking, actions/events would be interpreted as purely temporal. A causal relation is a-temporal and therefore what is the cause can be presented after the effect. For example, in English a clause of cause introduced by “because” can follow the clause of the effect. However, in Chinese such reverse ordering is disfavored. True causal relations are expressed by *yinwei...suoyi* “because...therefore”. A clause of cause following one of effect is considered an afterthought and such presentation of cause-effect relation is considered sloppy. Chu and Chang argue that the use of *le* indicates that the interclausal relation is causal rather than purely temporal.

The hypothesis about the first discourse function of *le*, namely marking the peak event of a sequence will be tested in this section using the Varbrul software. As for the hypothesis about its second discourse function, I will show that none of the examples given by Chu and Chang (1987) supports such a claim. Their first example is reprinted below as example (191).

- (191) *Dang wo jiaoxing kaoshang le Bei-shi yisuo shili gaozhong,*
 when I lucky admitted LE Taipei city one municipal high school
jiali ranfang le yichuan bianpao, zuzu gaoxing le haoji tian.
 home fire LE a bundle firecrackers thorough happy LE quite a few days
 (When I was, luckily, admitted to a municipal high school in Taipei, my
 folks set off a string of firecrackers and we were thoroughly immersed in

happiness for several days.)

Chu and Chang (1987) argue that the first two instances of *le* mark a cause-effect relationship. Without them the sentences would simply represent three separate events in a sequence with the last one as the culmination. However, it is doubtful whether particle *le* has such a function. The cause-effect relationship is intact without *le* in the first sentence of the above example. As for *le* in the second and third sentences, its presence is required by a rule which has nothing to do with marking cause-effect relationship. Its presence is required because the second and third clauses of the above episode present two quantified events (Li and Thompson 1981). It could be argued that it is not discourse reason but the semantic feature of the situation that motivates the use of *le*.

In their second example reprinted as (192),

(192) *Jinian zhihou, Zhugeliang de zhengce dajianchengxiao,*

A few years later Zhugeliang DE policy greatly effective

Shuguo huifu le yuanqi, bingqiang mazhuang, liangshi chongzu.

Shu kingdom recover LE energy soldier-strong horse-sturdy food sufficient

(A few years later, Zhugeliang's policy proved to be greatly effective. As a

result, the Kingdom of Shu recuperated, with its soldiers stout, horses

strong, and food supplies abundant.)

that the kingdom of Shu recuperated is neither the cause nor effect of its soldiers being stout, horses being strong and food supply abundant. The excellent states that Shu's

soildiers, horses and supplies found themselves in are simply the evidence of Sun's capability. Therefore, particle *le* does not mark cause-effect relationship between the second and the third sentence.

In their third example, only the particle *le* in the first sentence could possibly mark a cause-effect relationship. Neither the second nor the third *le* marks such relationship.

(193) *Jiandaban tingjian le zheju hua, qie zai wuting menjou shazhu le jiao,*

Jin-captain hear LE this-M speech thereupon at dancehall doorway stop LE foot

rang neiqun jijiguagua de wuniang yuguanerru, jin le wuting hou...

let that-group giggling DE dancers swarm-enter enter LE dance-hall after...

(Upon hearing this, Captain Jin brought her feet to a sudden halt at the doorway of the dance hall. And after she let the swarm of dancers walk into the dance hall like fish swimming in a line, ...)

In their last example, although the relationship between the second and third sentence could be causal, it is doubtful whether *le* emphatically expresses such a relationship because it remains causal without *le*.

(194) *Sunquan bu zuo diaocha, jiu tingxin le chanyan*

Sunquan not do investigate, then listen-believe LE malicious talk

xialing ba Zhangxiu daibu xiayu.

order BA Zhangxiu arrest jail

(Sunquan, without investigation, believed the malicious talk he heard and ordered to have Zhangxiu arrested and put to jail).

Contrary to what Chu and Chang's (1987) claim that *le* marks causal in addition to anterior relationship, it can be argued that the use of *le* is to emphatically mark temporal relationship of anteriority. *tingxin* "listen-believe" in the second sentence refers to a stative situation. In the absence of *le*, it is not necessarily anterior to *xialing ba Zhangxiu daibu xiayu* "order BA Zhangxiu arrest jail" but may well overlap it temporally. In other words, Sun's being susceptible to malicious talk is one of the weaknesses in his personality which characterizes him before the event of throwing one of his loyal followers into prison, during the event, and even after the event. Through the use of *le* the relationship of anteriority is made explicit. As I explained in Chapter II, when perfective viewpoint (*le*) presents with stative situations, it interacts with the initial boundary of the situation and the result is the meaning of inchoativity. So when *le* is used in the above example, it signals that *jiu tingxin le chanyan* "then believed the malicious talk he heard" actually indicates an event which is temporally anterior to the following event "ordering to have him arrested" That Sun fell to malicious talk is a discrete event. (Whether he is a person susceptible to malicious talk, we do not know. But in this case, he fell to bad conselling and as a result did some thing foolish.) Without *le*, the relationship would have been construed as purely causal.

It turns out that the examples given by Chu and Chang (1987) do not support their claim that *le* marks causal relationship in addition to temporal anteriority. It seems that

such function cannot explain the occurrence of *le* in non-peak event clauses in the above examples.

Focusing on verbs which have an object and/or complement and are mainly concerned with the syntactic configuration in which the verbal *le* occurs, Shi (1988) presented a multivariate analysis of the use of *le* using the Varbrul program. He found that sociolinguistic factors such as sex and dialect background do not have an effect on the variable while informal settings favor deletion of particle. The group of factors that has the strongest constraining effect is syntactic in nature. In particular, he found that the verbal *le* is more likely to be deleted (a) if the preceding verb is in a resultative construction; (b) if it is in a temporal subordinate clause than any other type of clause; and (c) if there is a sentential *le* as well.

Shi (1988) also found a morphological constraint on the use of verbal *le*. It operates as a phonological bias against tri-syllabic verbal phrase. A di-syllabic verb such as *canjia* “participate”, which results in a tri-syllabic verbal structure with the addition of a resultative complement *wan* “finish”, is less favored than the di-syllabic structure of a mono-syllabic verb plus such a complement. Chu and Chang (1987) also observed that the morphology of verbs plays a role in the variable use of *le* such that monosyllabic action/event verbs generally require *le* while verbal phrases with a classical flavor are incompatible with it.

By focusing on the verbal *le*, Shi (1988) bypassed the issue of *le* that is at the same time verbal and sentential. For example, the particle *le* from the following two examples appears as verbal *le*.

(a) verb + LE + complement of goal

(195) *ta jin le daxue yihou jiu you fanwan le.*

he enter LE college after then have rice-bowl LE

After he gets into college, he then has his job secured.

(b) verb + LE + complement of result

(196) *houlai jiu ba ta neng le chulai*

later then BA him get LE out

Later they singled him out.

However, the particle could occur at the end of the clause while the clause remains in the foreground of the story.

(195*) *ta jin daxue le yihou jiu you fanwan le.*

he enter college LE after then have rice-bowl LE

After he gets into college, he then has his job secured.

(196*) *houlai jiu ba ta neng chulai le*

later then BA him get out LE

Later they got him out.

Since the focus in this dissertation is not the variable use of verbal *le* but rather the variable use of perfective *le*, verbal *le* occurring at the end of a foreground clause is also included.

In addition, it is problematic for Shi (1988) to lump directional complements together with resultative complements, because there is a crucial difference between a verbal phrase with resultative complement and one with directional complement in terms of the syntactic position of perfective *le*. The former does not allow perfective *le* between the verb and the complement. However, the latter does. Perfective *le* between the verb and the directional complement is the preferred position.

(197) *houlai jiu ba ta nong shang le*

later then BA him get injured LE

Later he got injured.

(197*) *houlai jiu ba ta nong le shang*

later then BA him get LE injured

Later he got injured.

(198) *houlai jiu ba ta nong chulai le*

later then BA him get out LE

Later (they) got him out.

(199) *houlai jiu ba ta nong le chulai*

later then BA him get LE out

Later (they) got him out.

Finally, when exploring the effect of the type of clauses on the non-use of the verbal *le*, Shi presented categories of clause types which seem not to be mutually exclusive. For

example, he defined matrix clause as a main clause with no subordinate clauses, and narrative clause as one in a sequence of sequentially ordered clauses. However, it is obvious that they are not exclusive, so at least his claim that a temporal clause favors deletion over any other type of clause might be compromised.

A New Variable Analysis

Andreasen (1981) suggests treating verbal *le* as one of the typical foregrounding devices in narrative discourse, with other devices being various verbal complements. In describing the encoding of temporality in Chinese narrative presented in Chapter III, I have shown that perfective *le* is indeed one of the explicit means of encoding foreground, although it is less favored than explicit encoding by temporal adverbials.

According to Labov and Waletzky (1967), for two consecutive clauses to form a minimal narrative, they have to be separated by temporal juncture. In other words, they have to be temporally closed to each and cannot overlap. Hopper (1979, 1982) identifies the function of perfectivity as expressing temporal closure of a situation, a function that is sufficient to help form the foreground of a narrative. Perfective *le* could potentially appear in all foreground clauses. Therefore, in the context of foreground, we have a variable – perfective *le*. Sometimes perfective *le* is used to explicitly express temporal closure and other times it is omitted. In this section I will explore the variable use of perfective *le* by native speakers of Chinese in the foreground of narratives. It should be pointed out that although Varbrul analysis might be instrumental in sorting out the multiple factors affecting the use of *le*, it is mainly used as a heuristic tool to uncover patterns of use. I am not claiming any psychological reality for the variable rule that

might be revealed by the Varbrul analysis. Despite this, the finding could be very important for a comprehensive descriptive grammar and very useful to learners.

Potential Factors

Drawing on the findings of previous studies and the findings of descriptive study in Chapter III of this dissertation, I will look into the following factors that help to determine how likely perfective *le* is omitted. Generally speaking they fall into three larger groups: situational semantic features, morpho-syntactic features, and discourse features.

Morpho-Syntactic Factors

- Quantification

According to Li and Thompson (1981), *le* is used for events with quantification. We would thus expect *le* to be more likely to occur with quantified events. The event is quantified when the verb is followed by an adverbial or a clausal complement of duration, frequency, and extent.

- Specificity

An event is a specified event when the verb is followed by an object with specific reference. According to Li and Thompson (1981), a specified event should favor the use of *le*.

- Verbal Complement

Shi (1988) found that *le* is more likely to be deleted after a resultative verbal compound. I would hypothesize that the presence of directional complements or prepositions serving as goal should also favor deletion.

- The Syllabic Structure of VP

The syllabic structure of VP after which *le* could potentially occur has a constraining effect on the use of *le*. Both Chu and Chang (1987) and Shi (1988) found that monosyllabic verbs favor *le*, while Shi also found that di-syllabic verbs are disfavored.

Situational Semantic Features

- Stativity

Since foreground presents events on the storyline and is associated with actions and motions, we would expect *le* to occur more often with dynamic situations than with stative situations, even though perfective viewpoint is arguably available to stative situations.

- Telicity

Perfective viewpoint and telic situations share the temporal feature of boundedness, although the boundaries for them come from different sources. We would expect perfective viewpoint, although not confined to telic situations, to correlate with telicity.

Discourse Factors

- Temporal Adverbials

Temporal adverbials encode temporal advancement explicitly. Their presence could make perfective viewpoint particle *le* redundant. We could hypothesize that the presence of temporal adverbials disfavor the use of perfective *le*.

- Peak Event

Chu and Chang (1987) found that *le* tends to mark the peak event on a storyline. We would expect being the last event in an event sequence favors marking with *le*.

Individual Style

The survey conducted by Spanos (1979) revealed that judgments on the appropriateness of the use of *le* differ among native speakers. Therefore, individual difference could be a possible factor in the variable use of *le*.

Coding

Since this section is only concerned about the variable use of perfective *le* in foreground, clauses with verbs incompatible with *le* are excluded because such clauses constitute linguistic contexts where the use of *le* is categorical. They include such verbs as

a) verb in the progressive: *zai* + verb;

This includes *zai* in such structures as *zai* + location + verb and adverbials with verbs such as *yizhi* + verb, *jixu* “continue”

b) verb phrases with modal verbs: *neng* “can”, *yao* “will”;

c) verb phrases with negative particles: *mei* or *bu*;

d) infix verb: *chi de/bu qi* “can/can’t afford to eat”;

e) verbs of quotation, opinion, belief: *shuo* “say”, *yiwei* “mistakenly thought”, *renwei* “think”, *juede* “feel, think”;

f) verbs that are idiomatic phrases: *momingqimiao* “baffled, surprised”;

Dependent Variable

- 1 - presence of the perfective *le* in foreground
- 0 - absence of the perfective *le* in foreground

Independent Variables

Factor group 1: quantified event or not

- f - the predicate is followed by a complement of frequency such as
mo le yi xia
 touch LE **one stroke**
 (He) touched it.
- x - the predicate is followed by a complement of extent such as
nage shuiguo jiu sa le man di
 that fruit then spill LE **full ground**
 The fruit then spilled all over the ground.
- h - the predicate is followed by a complement of duration such as
ta zou le yihuir
 he walk LE **a while**
 He walked for a while.
- u - the clause does not have any of the above quantifications

Factor group 2: direct object in the predicate or not

- y - containing direct object with specific referent, e.g.
ta jian qi maozi
 he pick up **hat**

He picked up **the hat**.

c - generic object

ta you shang lu le

he again go on **road** LE

He then started off.

w - without direct object, e.g.

ta hui tou kan le hao ji ci

he turn back look LE quite several time

He looked back a few times.

Factor Group 3: with verbal complement in the predicate or not

d - a verb plus directional complement, such as

cong tizi pa xialai

from ladder climb **down**

(He) climbed **down** the ladder.

g - a verb plus a complement of goal (including *gei* “give”)

ranhou ba nage bale fang dao dishang de louzi litou

then BA that pear put to **ground** Gen basket in

(He) then put the pears **in the baskets on the ground**.

r - a verb plus a resultative complement such as

ba ta de maozi zhuang diao le

BA he Gen hat bump off LE

(She) knocked off his hat.

e - the predicate does not contain any of the above complements

chezi jiu dao le

bike then fall LE

The bike then fell.

Factor group 4: syllabic structure of VP after which *le* could potentially occur

i - bi-syllabic verb

ta wancheng (le) renwu

he **complete** (LE) task

He completed the task.

o - mono-syllabic

ta xian dao (le) Shanghai, ranhou qu le Guangzhou

he first **arrive** (LE) Shanghai then go LE Canton

He first went to Shanghai and then Canton.

m - multi-syllabic

ba dian zhong ta hai mei lai, women jiu chi qilai (le).

eight point clock he still not come we then **eat start** (LE)

By eight o'clock he still has not come, so we started to eat.

l - a reduplicated verb such as

you kan (le) kan tamen sange xiao haizi

again **look** (LE) look they three little boy
 (He) then looked at the three boys

Factor group 5: stative vs. dynamic

- s - stative situation
- n - non-stative situation

Factor group 6: telic vs. atelic

- t - telic situation
- a - atelic situation

Factor group 7: discourse marking of temporal advancement

- Y - with adverbials expressing temporal movement
- Q - without adverbials expressing temporal movement

Factor group 8: position of the foreground clause in a possible sequence

- B - the clause is the first of a sequence of F clauses
- C - the clause is the last of a sequence of F clauses
- D - the clause in the middle of a sequence of F clauses

Factor group 9: individual style difference

Letters A through T in upper case are used to code the 20 native speakers of Chinese.

Results

Varbrul is a multivariate correlational program. Modeling variation using Varbrul requires that (a) there is variation involving the use of the linguistic element under investigation; and (b) the factors do not interact with each other. For example, suppose there is no variation in the presence of a temporal adverbial because none of the clauses has *le* or everyone has one. In either case, the factor of temporal adverbials is a knockout and will not enter Varbrul analysis. If it happens that there is only one factor in a factor group, it becomes a singleton and will also be kept out of Varbrul. In the present study, the factor group of stativity contains only the single factor of non-stative situation and is thrown out as a singleton group.

If there is no interaction among the factors, the factors should have similar effect on the variable under investigation. For example, if mono-syllabic verbs and direct objects with specific reference disfavor omission of perfective *le* independently, they should also disfavor omission when they occur in the same sentence. If not, there is an interaction between the two factors. Interaction is of research interest on its own and should be checked and kept out of Varbrul analysis. No interaction effect among the nine groups of factors was found for the present study.

Among the eight factor groups that finally entered the Varbrul analysis, five were found to have constraining effects on the variable use of perfective *le* in the foreground (significance level at .05). The significant results of the Varbrul run are summarized in Table 5, in order of decreasing group effect.

Table 5 Omission of *le* by LI

Application (%)	71			
Input probability	0.83			
Chi-Square/Cell	1.133			
Significance Level	0.05			
Factor Groups (ranking order of strength)		weights	applications (%)	total
*2 (5) Direct object	y(spec)	0.63	76	245
	w(no)	0.35	64	192
	c(gen)	0.22	90	10
*3 (1) Verbal complement	d(dir)	0.91	89	118
	g(goal)	0.78	90	84
	e(no)	0.22	51	153
	r(result)	0.13	62	92
*4 (3) Syllable structure	m(multi)	0.82	95	22
	i(di)	0.68	77	243
	o(mono)	0.24	59	182
	l(redup)	N/A	100	11
*6 (4) telicity	a(atelic)	0.97	88	34
	t(telic)	0.43	69	413
*8 (2) Position of clause	B(1 st .)	0.73	85	102
	D(mid)	0.52	75	245
	C(last)	0.23	46	99

A few words on the interpretation of Varbrul results are in order. Varbrul analysis takes one level of the dependent variable as the application value. In the case of the variable use of perfective *le*, there are two levels, i.e. the particle is either used or omitted in the foreground. As the title of Table 5 indicates, the omission of *le* (0 in the coding) is

selected as the application value. Therefore, for the first factor *d* in factor group 3, the number 89 means among a total of 118 clauses in the foreground with a directional complement, 89 percent or 105 of them do not have the perfective *le*. This percentage gives readers a hint of but does not decide the actual constraint the presence of directional complement has on omission of *le* because the factor group of verbal complements might correlate with another factor group, for example, that of the syllabic structure of the main verb, in such a way that clauses with directional complements tend to contain main verbs with at least two syllables, a factor also in favor of the omission of *le*. Therefore, the high percentage of clauses with directional complements observed without *le* could be attributed to the fact that most of them contain di-syllabic or multi-syllabic verbs. For a reliable indication of the strength of the factor of directional complement, the reader needs to look at the weight. When the weight is around .50, it means that the factor in question does not have a constraining effect on the omission of *le*. The further away it is from .50 in either direction means the factor has a stronger constraining effect. The number of .91 indicates the presence of directional complement strongly favors the omission of *le* in foreground. In contrast, a weight much lower than .50, for example .13 for resultative complement, indicates the omission of *le* is strongly disfavored. In other words, *le* is very likely to be used when the main verb has a resultative complement.

Overall, as the input probability indicates, regardless of any possible variable rule, the likelihood that perfective *le* is omitted in foreground is .83. This confirms that *le* is not the most often used means of encoding temporal advancement in foreground, a point that has been discussed in Chapter III. Three morpho-syntactic factors, one discourse factor

and one semantic feature emerged as the most important groups of factors in shaping the pattern of use of perfective *le* in the foreground. Individual style, quantified event, and temporal adverbial were found to have no substantial effect on the variable use of *le* in foreground.

First, whether the main verb has a verbal complement has a strong constraining effect on the use of *le*. When the predicate does not contain any verbal complements (.22), omission of perfective *le* is strongly disfavored. In contrast, the presence of a directional complement (.91) or the presence of a goal in the form of preposition (.78) strongly favors omission of perfective *le*. However, unlike other kinds of verbal complements, the presence of a resultative complement (.13) strongly disfavors omission.

Second, where the clause containing the verb appears in a sequence of events also has a constraining effect. Omission of *le* is favored in the first clause (.73) of such a sequence and disfavored in the last (.23) while being the middle does not have a substantial effect (.52).

Third, whether perfective *le* is likely to be omitted is influenced by the syllabic structure of the verb after which *le* could potentially occur. No omission of *le* was observed with reduplicated verbs. A monosyllabic verb (.24) disfavors the omission of perfective *le* while a verb with two syllables (.68) or with multiple syllables (.82) favors omission.

Fourth, the boundary feature of the situation that the clause containing the verb encodes also has a role to play. When the verb helps to express a telic situation (.43), *le* is

less likely to be omitted. In contrast, an atelic situation (.97) strongly favors omission of *le*.

Fifth, whether the verb has a direct object with specific reference has some bearing on the likelihood of the use of *le*. If the verb does not have a direct object (.35) or the direct is only generic (.22), omission of *le* is disfavored. However, if the verb has a direct object with specific reference (.63), it is more likely to be omitted.

Finally, with regard to possible variation according to individual style, the result agrees with Shi (1988) and contradicts Spanos (1979), a finding that will be discussed in more detail below.

Discussion

(i) Internal Factors

Morpho-syntactic factors and situational semantic factors are internal in the sense that they have more to do with the linguistic structure of the language than with the way native speakers choose to speak.

According to Li and Thompson (1981), the first kind of event for which *le* could be used is a quantified event. Factor group 1 is designed to test whether such quantification has an effect on the use of *le*.

Table 5-a Possible Effect of Quantification

Factor groups	Weights	%	N
Group 1			
quantified event			
u (no quantification)	.51	72	433
f (frequency)	.33	21	14
x (extent)	n/a	0	6
h (duration)	n/a	n/a	0

No examples of quantification of duration (factor h) were found in the dataset. Altogether six instances of quantification of extent (factor x) were found, all of which occurred with *le* and thus the factor was thrown out as a knockout. The results in Table 5-a show that without quantification the probability an event is encoded with or without *le* is almost fifty-fifty (.51). However, in the presence of quantification of frequency, omission of *le* is less likely (.33), although the factor is not found to be significant. In order to test whether the presence of any kind of quantification mentioned above has an effect on the variable use of *le*, the factors of quantification of extent (x) and quantification of frequency were collapsed and recoded as q. The recoding did not change the results and factor group 1 remains insignificant. This study failed to find evidence in support of Li and Thompson's proposal that a quantified event is a favoring context for the use of *le*. However, since the dataset used in this study contains no tokens of quantification of duration and only six tokens of quantification of extent, a dataset more representative of the use of quantification is necessary to confirm or disconfirm Li and Thompson's conclusion.

The second kind of context favoring the use of *le* is a definite or specific event, largely dependent on whether the direct object has a specific reference. Factor group 2 is designed to test if the existence of a direct object with the main verb constrains the use of *le*. As it turned out, contrary to what Li and Thompson (1981) claimed, the existence of a direct object with specific reference slightly favors omission of *le* (.63). At the same time, when a direct object is absent (.35) or is generic (.22), omission of *le* is disfavored. That *le* is more likely to be omitted in the presence of a direct object with specific reference

can be explained by the fact that it is the presence of a direct object with specific reference that renders the situation described by the clause telic (Tenny 1994) and therefore temporally bounded (Smith 2000), a necessary condition for a situation to appear in the foreground. Since the situation is temporally bounded by virtue of its own temporal features, perfective *le*, which presents a situation as temporally bounded, is not necessary. It does not mean that such temporally bounded situation cannot be presented by *le* at all. The results of Varbrul analysis only show that such a situation slightly favors omission of *le*. In terms of the strength, the presence or absence of a direct object with specific reference has the weakest constraining effect among the five significant groups of factors.

The third context where *le* is supposedly more likely to appear is with an event being inherently bounded because of the verb's meaning. However, verbs so inherently bounded often happen to be mono-syllabic verbs such as *si* "to die", *wang* "to forget", and *diu* "to lose". The syllabic structure of a verb could be a potential compounding and correlating factor. Besides, an event is temporally bounded not because of verbs alone but rather because of verbs in combination with other constituents such as direct objects and verbal complements. Therefore, elements larger than the verb need to be investigated. In order to examine whether the boundedness of an event constrains the application of *le*, I decided to look at the following group of factors: the existence of various verbal complements, the formal constraint found by Shi (1988) against tri-syllabic morphological units, and two situational semantic features.

As is shown in Table 5, in terms of strength, factor group 3 exerts the strongest constraint on the use of *le* in foreground. The presence of a directional complement (.91) or a goal (.78) strongly favors omission of perfective *le* while absence of verbal complements strongly disfavors omission of *le* (.22). However, the presence of a resultative complement (.13), unlike directional complement and complement of goal, also disfavors omission. A possible explanation is that some resultative complements (such as *dao* “arrive” and *kai* “open”) are so indispensable to the aspectual structure of a situation that they become part of the verbs. In other words, the compound verbs they form with the main verbs behave just like any other simple verbs. Therefore, they pattern like verbs without any verbal complements when it comes to the use of perfective *le*. This is why although Shi (1988) focused on the particle *le* that immediately follows the verb, he felt compelled to treat some verbs plus their resultative complements as a compound unit when considering their syllabic structures. The finding that resultative complement disfavors omission of *le* contradicts Shi’s (1988) finding that it favors omission. The reason that the present study and the study by Shi (1988) came to opposite conclusions regarding the effect of resultative complements is perhaps because Shi (1988) only looked at the position that immediately follows the verb and thus excluded those instances of *le* occurring elsewhere. However, in this study, a *le* that follows the resultative complement which is after the verb is also counted, because it also encodes perfectivity. Besides, Shi’s (1988) finding that the presence of a resultative complement favors omission of *le* is due to the fact that Shi inappropriately used resultative complement as a cover term for both directional complements and resultative

complements, which are actually two very different kinds of verbal complements. In the present study it was found that there are more directional complements (118) with a larger proportion of them co-occurring with *le* (89%) than there are resultative complements (92) with a much smaller proportion of them co-occurring with *le* (63%). It would have probably found resultative complement favoring omission of *le* if the two kind of complements had been lumped together, which would have been inappropriate because they are two different structures.

When it comes to the possible effect of the syllabic structure of the main verb after which *le* could potentially occur (factor group 4), the present study yields results similar to Shi's (1988): a mono-syllabic verb (.24) strongly disfavors omission of *le*, while a verb with two syllables (.68) slightly favors and verbs of more than two syllables (.82) strongly favor omission. I agree with Shi (1988) that both functional (semantic) constraint and formal (morphological) constraint are operative in this respect. I only want to add that the formal constraint is not purely morphological. That *le* tends to occur with mono-syllabic verbs rather than bi-syllabic or multi-syllabic verbs could be because of prosodic constraints. In modern Chinese, the majority of words are bi-syllabic. A mono-syllabic verb forms a bi-syllabic unit with particle *le*, which conforms to this bi-syllabic tendency. The addition of *le* to a bi-syllabic verb would result in a tri-syllabic unit, which is less favored. The addition to a tri-syllabic verb is even less favored. Finally, it is possible for a reduplicated verb such as *kankan* "look" to occur with *le* (*kan le kan*). However, all ten instances of reduplicated verbs in the dataset are without *le*. The factor was thus thrown out as knockout.

Factor group 5 divided foreground clauses into two groups, one encoding stative situations and the other non-stative situations. Stative situations by definition do not have inherent boundaries. As it turned out, after clauses with modal verbs or with negative particles were excluded together with those clauses with verbs incompatible with *le*, all the 464 foreground clauses that constitute the data file encode non-stative situations. The factor group became a singleton group and therefore was left out of the Varbrul analysis. Therefore the result on the possible effect of this factor group remains inconclusive. The fact that no stative situations entered Varbrul analysis does not imply that stative situations cannot appear in the foreground. They were left out of Varbrul analysis because they happened to contain modal verbs or be in the negative, which are incompatible with perfective *le*. To appear in the foreground, a stative situation needs to be presented by perfective *le*, which as I have argued in Chapter II, is available to stative situations in Chinese, or their boundary features should be supplied by the context.

As for the other groups of factor of situational semantic features, it is found that telic situations (.43) slightly disfavor omission of *le* while atelic situations (.97) strongly favor omission. There are far more telic situations than atelic situations in the foreground, 413 to 34, proving that temporal closure is the necessary condition of a foreground clause. Since telic situations are by definition temporally bounded and can move narrative time in the absence of perfective viewpoint marker, the presence of *le* appears to be redundant. However, redundancy in language is not unusual. For example, the past tense morpheme *-ed* in the English sentence “I visited a friend yesterday” is redundant because past tense is clearly encoded in “yesterday”. I am not going to delve into the role of redundancy in

information processing. I will just take redundancy as a fact. While there is nothing unusual about redundantly encoding temporal boundedness, the fact that a larger percentage of atelic situations are without *le* is remarkable in that there has to be contextual information to indicate temporal closure. As I have explained in Chapter IV when discussing relying on context to encode temporal advancement, not only do atelic situations without perfective *le* need contextual support they also often form expectancy chains with neighboring clauses to make their presence justifiable. While reliance on context is possible, it is not the preferred way of encoding temporal relations in foreground by native speakers and therefore the percentage of atelic situations without *le* among all the foreground situations remains small.

(ii). Discourse Factors

As for the possible role of temporal adverbial expressions, it seems its presence (.52) or absence (.46) does not have any noticeable effect on the use of perfective *le*, as this factor group was found not to be significant.

Table 5-b Possible Effect of Temporal Adverbials

Factor groups	Weights	%	N
Group 7 with or without adverbials			
Y	.52	73	304
Q	.46	66	142

This should not come as a surprise, since *le* is by no means the most often used device of encoding temporal advancement. Although we might expect it is more likely to be used

in the absence of temporal adverbials, it is not absolutely necessary as other devices such as being telic can indicate temporal juncture and move narrative time as well.

The analysis does find that factor group 8, which encodes where *le* appears in a sequence of events, has a constraining effect. Indeed, it is the second strongest factor group, only following whether the verb has a verbal complement. The results show that Chu and Chang (1987) are right about the discourse functions of perfective *le*, that is, it marks peak event. Among the three positions where *le* can appear in a sequence, it is most likely to be omitted when the clause encodes the first of a sequence of events (.73), and least likely to be omitted when the clause encodes the last event in the sequence (.23). Being in a middle of a sequence does not have an effect on the omission of perfective *le* (.52).

(iii). Individual Styles

In terms of the possible effect of individual differences, previous studies have yielded contradictory results. The survey study (Spanos 1979) found that individual style makes a difference while the Varbrul analysis by Shi (1988) found no difference attributable to individual factors. The present study, with apparent individual differences ranging from .07 to .77 (see Table 5-c), however seems to agree with Shi's (1988) results, as the differences among the 20 native speakers of Chinese in terms of their use of perfective *le* in foreground are statistically insignificant.

The inconclusive results on the possible effect of individual differences found in this study might be due to the inadequate number of tokens produced by some native speakers

(for example, seven tokens by R and nine tokens by D), which fell far short of the expected frequencies necessary to yield any dependable results. To decide whether the

Table 5-c Individual Styles

Factor Groups	weights	applications (%)	total
Group 9: A - T	-----	-----	-----
I	0.77	86	14
H	0.67	74	23
K	0.67	70	37
E	0.66	82	38
F	0.65	72	32
G	0.63	83	24
L	0.63	83	29
T	0.62	79	19
M	0.59	78	18
S	0.59	59	27
J	0.57	85	26
A	0.47	69	13
Q	0.46	78	9
D	0.43	71	31
B	0.39	67	27
P	0.37	69	16
C	0.28	64	11
R	0.22	43	7
N	0.09	41	17
O	0.07	41	29

variable use of perfective *le* is influenced by individual styles, further studies with larger data sets are necessary.

Summary

The variable use of perfective *le* in the foreground of stories is largely shaped by multiple constraints, including formal, discourse and semantic constraints. Formal

factors, which include the kind of direct object of the main verb, the kind of verbal complement, and the syllabic structure of the main verb, exert the strongest constraints. One discourse factor, the position of the clause in an event sequence, also has a strong effect. The situational feature of telicity also has a constraining effect, although its effect is not as strong.

Li and Thompson's (1981) theorization of the contexts favoring the use of *le* needs to be reformulated. The results of the present study show that being a specific event or being the first event in a sequence does not necessarily favor the use of *le*. Although the feature of temporal boundedness is found to be correlated with the use or omission of *le*, this feature is relevant on the level of clause rather than that of the verb. Further studies are needed to determine whether being a quantified event has any effect on omission of *le*.

Section Two. THE VARIABLE USE OF *LE* BY CHINESE L2 LEARNERS

In this section, I will examine the variable use of perfective *le* in foreground by L2 learners. A word of caution is in order. Unlike studies such as Yang et al (1999, 2000), the Varbrul results do not indicate overuse or underuse of perfective *le* by adult learners. Underuse of *le* is defined as failure to use it when it is expected and overuse as the suppliance of the morpheme when its use is prohibited. Both types of errors invoke the categorical rules of perfective *le*. However, we are here dealing with the variable use of perfective *le* where neither failing to use *le* in a favoring context nor supplying *le* in a disfavoring context constitutes an error. Therefore, this part of the study is not comparable to studies of the overuse or underuse of *le*.

As with the native speakers of Chinese, nine groups of factors are investigated and the same coding scheme is used. The only difference is that with learners, factor group 9 does not encode individual speakers but rather three proficiency levels, and therefore only three codes L, M, and H are used, standing for Low, Medium, and High proficiency level respectively. Factors groups 5 and 6 were thrown out as singleton groups and only seven groups of factors remained for the first Varbrul run.

Results

As has been done with native speakers' data, the learners' data were checked for possible interaction effects among the nine factor groups. No significant interactional effects were observed. For the sake of comparison, the results are presented along with the Varbrul results from LI speakers (Table 6). All factors are presented, irrespective of whether they are significant factors or not.

As the input probability indicates, regardless of any possible variable which might be applicable, the likelihood that L2 learners will omit perfective *le* in foreground is .95, indicating that learners use *le* very infrequently. Among the seven groups of factors tested, five were found to be significant, three of which are morpho-syntactic factors, one a discourse factor and one a factor of proficiency level. It is clear that morpho-syntactic factors exert the strongest constraints; the factor of proficiency was less strong; and the discourse factor was the weakest constraint. It is remarkable that the same three groups of morpho-syntactic factors are also operative for native speakers of Chinese. However, among the two discourse factor groups tested, the discourse factor (peak event) that has a constraining effect for native speakers does not for learners, whereas the factor group

Table 6 Omission of *le* by L1 and L2

L1					L2				
Application (%)	71				Application (%)	87			
Input probability	0.83				Input probability	0.95			
Chi-Square/Cell	1.133				Chi-Square/Cell	1.599			
* Significance Level	0.05				* Significance Level	0.05			
Factor Groups (ranking order of strength)		weights	Application (%)	Total	Factor Groups (ranking order of strength)		Weights	Application (%)	Total
1 quantification	u	0.51	72	433	1	f	0.79	86	7
	f	0.33	21	14		u	0.49	87	446
	x	N/A	0	6		x	N/A	0	1
	h	N/A	N/A	0		h	N/A	N/A	0
*2 (5) direct object	y	0.63	76	245	*2 (1)	y	0.74	95	263
	w	0.35	64	192		w	0.2	75	190
	c	0.22	90	10		c	N/A	100	10
*3 (1) verbal complement	d	0.91	89	118	*3 (2)	g	0.93	99	102
	g	0.78	90	84		d	0.57	84	83
	e	0.22	51	153		r	0.28	84	93
	r	0.13	62	92		e	0.24	82	175
*4 (3) syllabic structure	m	0.82	95	22	*4 (3)	o	0.62	88	218
	i	0.68	77	243		i	0.44	86	207
	o	0.24	59	182		m	0.1	82	28
	l	N/A	100	11		l	N/A	100	7
5 stativity	s	N/A	N/A	0	5	s	N/A	N/A	0
	n	N/A	70	464		n	N/A	87	471
*6 (4) telicity	a	0.97	88	34	6	a	N/A	100	61
	t	0.43	69	413		t	N/A	85	410
7 temporal adv.	Y	0.52	73	304	*7 (5)	Y	0.61	89	186
	Q	0.46	66	142		Q	0.42	85	266
*8 (2) position of clause	B	0.73	85	102	8	B	0.51	86	103
	D	0.52	75	245		D	0.5	89	259
	C	0.23	46	99		C	0.49	79	90
9 individual style	A	to see Table 5-c			*9 (4)	L	0.68	93	114
	T					M	0.5	88	197
	T					H	0.35	79	141

found to be constraining learners is not operative to native speakers. It seems that native speakers and adult second learners are sensitive to the same morpho-syntactic factors but different discourse factors.

Finally, although both groups 5 and 6 were thrown out in Varbrul run for learners while only factor group 5 was for native speakers, the results show similar trends for native speakers and learners in terms of the possible effect of these factor groups, a point that will be taken up in more details in discussion.

Discussion

A noticeable finding from the Varbrul results is that learners did make progress in terms of their use of *le* in the foreground. The omission of *le* in foreground is more likely to occur with low-level learners (.68), less likely to occur with mid-level learners (.50) and unlikely to occur with high-level learners (.35). Such a finding gives further support to the conclusion in Chapter III that learners' reliance on grammatical encoding of temporality increases across proficiency levels.

As with native speakers, Factor group 1 was found not significant. The study is inconclusive as to whether quantification has an effect on omission of *le* for learners. If there is any indication of difference, it is the possible direction of such effect. Being a non-quantified event seems to have no effect on the omission of *le* for both L1 (.51) and L2 (.49). However, being a quantified event of frequency seems to disfavor omission for L1 (.33) but favor omission for L2 (.79).

For both native speakers and learners, factor groups 2, 3, and 4 were found to be significant and factor group 1 not significant. This shows that overall learners are like

their native speakers counterparts in that they are constrained by the same morpho-syntactic factors. The presence of a direct object with specific reference favors omission of *le* while its absence or the presence of a generic object disfavors omission. However, factor group 2 exerts the strongest constraint to learners while it is the weakest constraint to native speakers. The finding that learners are strongly constrained by the factor of direct object is interesting. There may be something other than input, something about the learner or learning process that accounts for the fact that learners are very sensitive to the factor of specific event in their use of perfective *le*. It is very likely that in the acquisition of the use of perfective *le*, what learners are sensitive to is not the presence or absence of direct object per se but rather the semantic feature of boundedness made possible by the incorporation of direct object (Tenny 1994).

Learners exhibit the same pattern as native speakers when it comes to the effect of a possible verbal complement. For both native speakers and learners, directional complements pattern with complements of goal and both favor the omission of *le* while resultative complements (.13 for L1 and .28 for L2) behave like verbs without any complements (.22 for L1 and .24 for L2) in that they both disfavor omission. The only noticeable differences are that directional complements strongly favor omission of *le* for L1 (.91) while they only slightly favor omission for L2 (.57), and while complements of goal strongly favor omission for L2 (.93) they only slightly favor omission for L1 (.78). So although overall the learners have acquired the constraints posed by verbal complements, there is still some fine-tuning to be done.

The syllabic structure of the main verb has a constraining effect on the use of *le* for both native speakers and learners. However, for the most part, the same factors in the group work in opposite directions. A mono-syllabic verb used by native speakers disfavors omission of *le* (.24), however, it favors omission when used by learners (.62). In both example (200) and (201), a native speaker will very likely use *le*, but it was left out by the learners.

(200)

46. *suoyi, ta na yige "basket"*

so he take one "basket"

So he took a basket. (Low-level 2)

(201)

52. *ranhou tamen zou*

then they leave

And then they left. (High-level 6)

Bi-syllabic verbs (.68) and multi-syllabic verbs (.82) used by native speakers favor omission. In contrast, both structures (.44 and .10) disfavor omission when used by learners. For example, learners used *le* with *kandao* "see" (sentence 202) or *faxian* "discover" (sentence 203) while *le* in such contexts is likely to be omitted by a native speaker.

(202)

26. *ta kan dao le zhe ge you shuiguo de lanzi*

he see LE this CL have fruit DE basket

He saw the basket with fruits. (High-level 1)

(203)

60. *ta faxian le zhe shi ta de shuiguo*

he discover LE this be his fruit

He discovered that it was his fruits. (High-level 1)

Similarly, if he decides to use perfective *le* in example (204) at all, a native speaker would very likely put it right after the main verb *diao* “to fall” instead of at the end of the sentence, which would result in a multiple syllabic unit. It seems that learners are not affected by such a constraint against multiple syllabic units. And to express the same idea encoded in example (205), a native speaker would most likely choose not to use *le* or avoid using it at the end of the sentence (205*).

(204)

58. *suoyi suoyou de neige shuiguo dou diao xia lai le*

so all DE that fruit all fall down LE

So all the fruits fell down. (High-level 4)

(205)

22. *fang neige shuiguo zai neige baozi zai yi ci le*

put that fruit At that basket again once LE

(He) put the fruit into the basket again. (Medium-level 4)

(205*)

zaiyi ci ba neige shuiguo fang zai (le) neige baozi li

again once BA that fruit put At (LE) that basket in

(He) put the fruit into the basket again.

Both the study by Shi (1988) and the present study have established that there is a constraint against units with multiple syllables in Chinese. Obviously learners have not acquired this constraint. It is interesting to note, however, that like the native speakers, the learners never used *le* with reduplicated verbs. Though the small number of tokens makes it impossible to draw firm conclusions, it is possible that the learners have acquired the native-like constraint in this salient environment.

All the clauses that were processed by the Varbrul program encode non-stative situations. Among those produced by native speakers, 71 percent were without perfective *le*. Among those produced by the learners, 87 percent were without *le*. Since the factor group 5 (stative vs. dynamic) was thrown out as a singleton group, we cannot decide whether being non-stative favors omission of *le*.

Native speakers of Chinese are very likely to omit *le* in a clause encoding an atelic event (.97) while a telic event (.43) slightly disfavors such omission. Since all the 61 atelic events produced by learners were without *le*, the factor group 6 (telicity) was thrown out in the Varbrul run for learners. However, judging by the percentage difference going from atelic to telic situations (88 to 69, a percentage difference of 19 for L1, 100 to 85, a percentage difference of 15 for L2), it seems that the factor works in the same direction for learners as it does for native speakers, although its effect is not significant.

Discourse factors have very different effects on native speakers and learners. For native speakers, whether a temporal adverbial expressing temporal advancement is used (.52) or not (.46) does not affect their use of *le* in foreground while it does for learners. In particular, the presence of such an adverbial (.61) slightly favors the omission of *le* while the absence (.42) slightly disfavors omission. Since temporal adverbials can explicitly indicate temporal relations, temporal information is intact without *le* and therefore learners tend to omit *le* in their presence. In the previous chapter, I uncovered some developmental patterns in the acquisition of temporality by adult learners. One of them is from lexical to grammatical, which shows that while learners' use of explicit means of encoding increases, their reliance on temporal adverbial decreases vis-à-vis grammatical means of encoding. The weak effect of temporal adverbials on omission of *le* indicates that learners are still relying on temporal adverbials to certain extent but such reliance is decreasing.

Finally, for native speakers, *le* serves the function of marking the peak event in a sequence, but for learners, where *le* appears in the sequence does not make any difference. While the last clause (.23) which encodes a peak event disfavors omission of *le* for native speakers, whether the clause is the first, in the middle, or the last of a sequence does not affect learners' use of *le*, with the weights of these factors being .51, .50, and .49 respectively. This clearly shows that learners have not acquired the discourse constraint on the use of perfective *le*, a constraint whose effect is very strong for native speakers.

Summary

As a group learners have acquired most of the morpho-syntactic constraints on the use of perfective *le* in foreground which are operative for native speakers. However, they have not acquired the constraints imposed by discourse factors such as the effect of a clause's position in an event sequence. As they gained proficiency, learners became less likely to apply the rule of omitting perfective *le* in the foreground, showing they are approximating native speakers in this respect. Meanwhile, their development reflects the universal pattern of lexical-before-grammatical so that non-constraining factor for native speakers, such as the presence of temporal adverbials, affect their use of *le*.

Even for the constraints they have acquired, they need to fine-tune their learning in at least three respects. First, the same factor group occupies a different position in a hierarchy of constraining strength for learners. A strong constraint on learners might only have a moderate effect on native speakers or a weak constraint on native speakers exerts unusually heavy effect on learners. For example, a direct object with specific reference, the weakest constraint for L1, is the strongest constraint for L2. Second, the same factor(s) within the same factor group might have contrasting effects for L1 and L2. For example, mono-syllabic verbs disfavor omission of *le* for L1 (.24) but favor omission for L2 (.62). And third, while it is not as urgent as the second scenario where learners have to unlearn what they have acquired, there is still the need of fine-tuning, even if the same factor(s) within the same factor group have similar effects for both L1 and L2, because the strength of the factor(s) could differ as much as from slight to moderate, or to strong.

For example, directional complements strongly favor omission for L1 (.91) but only slightly favor omission for L2 (.57).

Finally, the results on some of the factor groups are inconclusive. Their possible effects have to be determined by future studies.

Chapter VI CONCLUSION

Recognizing that temporality is a three-dimensional concept and that each dimension might be realized by different linguistic means in different languages, this dissertation starts with a discussion of an interactive three-dimensional theory of temporality with specific attention to its expression in narrative discourse. Within this framework, temporal information necessarily comes from three components: situational aspect, viewpoint aspect, and temporal location.

Situational aspect is a covert grammatical category in that every language distinguishes a limited number of basic situation types, and yet such distinction is not expressed by means of grammatical morphemes but rather through the whole clause. Every situation, regardless of its type, has to be made visible in discourse in some way. That is the function of viewpoint aspect, which presents a situation in certain viewpoint from a limited number of possibilities. Viewpoint is most often realized by grammatical morphemes, although some languages use other means such as particles or peri-phrasal structures. Viewpoint aspect and situational aspect interact with each other in language-specific ways so that certain viewpoint is only available to some types of situations. In discussing aspect in Chinese, I argued that perfective viewpoint as realized by particle *le*, is available to all types of situations including states and thus solved the problem of whether verbal *le* and sentential *le* are distinct morphemes or the same morpheme.

Every situation also has to be located with reference to an anchoring point in time, the function of temporal location. Temporal location can be expressed by grammatical morphemes, or by other means such as temporal adverbs, or it does not have linguistic

realization and has to be inferred from the context. Temporal location interacts with situational or viewpoint aspect in ways such that certain types of situations or situations presented in certain viewpoint receive certain default interpretations of temporal location. In Chinese, unless otherwise stated, a temporally bounded situation (a telic situation or a situation presented in the perfective viewpoint) receives past tense interpretation while a temporally unbounded situation (an atelic situation or a situation presented in the imperfective viewpoint) receives present tense. In discussing temporal location in Chinese, I argued that pragmatic information from the context is as important as information from the above-mentioned components of temporality.

Since what is of interest is temporality in narrative discourse, I then proceed to explore temporal relations in association with information structure in narratives. It is known that a narrative consists of two parts, a storyline and its supporting background. The former is necessarily located in the past whereas the situations in background are not necessarily. Situations in foreground are characterized by the temporal relation of advancement where events follow each other in sequence. In contrast, situations in background are characterized by temporal overlap or simultaneity. Qualitative analysis shows that there is a range of devices available in Chinese language to express these temporal relations, such as temporal adverbials, viewpoint markers, situational semantic features, and contextual support. The first two kinds are classified as explicit means because they involve the use of a particular linguistic expression that explicitly encodes temporal information while the last two kinds as implicit means because they do not. Although the third kind does not rely on the use of a particular temporal expression, temporal information is indeed

available from the meaning of the whole clause and therefore it is still linguistically based. However, the fourth kind does not involve any linguistic expression at all and thus is purely contextual.

Then I present two quantitative analyses of temporality in Chinese, one function-to-form analysis and the other form-to-function analysis. The first analysis builds on results of the qualitative analysis and establishes an inventory of devices used by native speakers of Chinese to encode temporal relations in narratives and a similar inventory by adult learners. Then the learners' inventory is compared against that of the native speakers to detect any developmental patterns in the interlanguage of native English-speaking learners of Chinese. It is found that both native speakers of Chinese and adult learners have available at their disposal a repertoire of encoding devices, although in comparison with native speakers, learners' repertoire is smaller and contains less varied items. Among the various kinds of devices, grammatical means is not the most often used. Both native speakers and learners seem to avoid relying entirely on context if they could.

Clear developmental patterns are found in learners' acquisition of temporality in narrative discourse. As learners gain proficiency in the target language, they grow from preferring implicit encoding to preferring explicit encoding, their use of grammatical means increases against lexical means, and their reliance on the discourse context decreases. These universal developmental patterns are observed in both the foreground and the background. What is found in this analysis also highlights the role of input, as most of the development tendencies reflect the grammar and language use by the native speakers. However, there is evidence that L1 transfer could additionally play a role in

learners' acquisition of some temporal properties of the target language. Factors in the learning process such as learners' over-emulation of native speakers could also influence their behaviors. Cross-linguistic research on expression of temporality in narratives by native speakers and adult learners of other languages would help determine the relative influence of these multiple factors.

In the second analysis, a particular grammatical form, the perfective *le*, is chosen as the focus of study. Previous research has established that perfective *le* is associated with the foreground of a story and its use in foreground is optional. I argue in Chapter V that foreground is an obligatory context for perfective *le* and perfective *le* is a linguistic variable. Using Varbrul software, this analysis considers an envelope of nine factor groups, which belong to three domain of factors: formal, discourse, and semantic factors, respectively. It is found that these three domains of factors all influence the variable use of perfective *le* in the foreground of stories, proving that the use of *le* is highly contextual. To be specific, formal factors, which include the kind of direct object of the main verb, the kind of verbal complement, and the syllabic structure of the main verb, have the strongest effect on the variable use of *le*. Discourse factors such as the position of the clause in a sequence has the second strongest effect. Situational features such as telicity and stativity also have constraining effects. However, their effect is not as strong as formal and discourse factors. A second Varbrul analysis is conducted for the learners, investigating the same nine groups of factors except the last one - individual style, which is replaced with proficiency level. Comparing the results of two Varbrul analyses, it is found that learners as a group have acquired most of the constraints on the use of

perfective *le* in foreground, although the same constraint may have different strengths on learners than on native speakers. Remarkably learners have not acquired the constraints imposed by the discourse factors and those by the syllabic structure of verbs. And learners still need to fine-tune their learning to fully acquire the use of perfective *le* in foreground.

The findings of this study have at least the following implications for the teaching of Chinese as a second language. First, since situational aspect is a covert grammatical category, presentation and discussion of situation types and their linguistic realizations should be incorporated into the pedagogical grammar. In view that viewpoint aspect and situational aspect interact in language-specific ways, the introduction of situational aspect is essential in the teaching of the use of viewpoint markers. Second, it is found that *le* has been over-represented in the input learners get from textbooks. Overall, particle *le* is not very frequently used to encode temporality in actual Chinese usage. However, as Chu and Chang (1987) observed, the frequency of *le* in textbooks designed for adult learners is at least four times as high as in the language produced by native speakers of Chinese. It is time to raise learners' awareness that as important as it is in encoding temporality *le* is only one of the many devices chosen for the purpose by native speakers and that they need to build up a repertoire of devices including non-grammatical devices as well. Third, a clear distinction between categorical and variable rules should be made when explaining the use of *le*. Some rules such as the incompatibility of *le* with archaic verbs which predated its emergence as aspectual particle are absolute. However, others such as mono-syllabic telic verbs disfavor omission of *le* are only tendencies. They are equally

important and a definitive account of the use of *le* is impossible without one or the other. Forth, explanation of the above-said tendencies should be sensitive to the multiple groups of factors which work together to determine the variable use of *le*. In particular, attention should be drawn to the constraints imposed by discourse factors which have been neglected in pedagogical grammar.

The findings of this study also have bearing on the acquisition study of aspectual particles in Chinese, in particular on their research designs. For example, since the use of *le* operates on two types of rules, categorical and variable, error analysis based on the study of the overuse or under-use of *le* would only make sense if it were first established that the use of *le* is categorical. There arises the need to examine the techniques that are commonly used by researchers to elicit learners' use of *le* in terms of the kind of data they elicit. Question-and-Answer technique as used in Wen (1995) **can** but does not necessarily always induce obligatory use of *le*. Story-telling (Wen 1995, Yang et al 1999) based on visual stimulus such as picture books or video clips most likely will activate variable rules. As for the corpus data used by Teng (1999) and Yang et al (2000), we do not know what kinds of rules are applicable because no information has been provided on the specific elicitation tasks. When the nature of rules is not clear, we cannot decide whether learners' use or omission of *le* is an error or just an indication that they are following patterns of the native speakers. Therefore, the variable nature of perfective *le* in certain contexts constitutes a challenge to the study of its acquisition. The present study suggests a possible solution. Although we cannot judge learners' performance in terms of absolute errors, we can nonetheless, with the help of Varbrul analysis as a heuristic tool,

determine learners' approximation to or deviation from native speakers' norm in terms of the possibility *le* could be use or omitted in similar contexts. Comparing Varbrul results for learners against those for native speakers, we found that not all the factors constraining L1 constrain L2. When they do, they usually have different degrees of strengths. Nor do factors constraining L2 necessarily constrain L1. The acquisition path necessarily involves learners' disassociation with factors that do not have constraining effects on native speakers and picking up those that do and fine-tuning their learning so that factors constraining both L1 and L2 have equivalent constraining strengths. With the native speakers' patterns as the baseline, which is established by Varbrul analysis, we can still chart learners' development, even without referring to errors at all.

APPENDICES

Appendix 1

Identity Code: 1

In: 妳今年是大一嗎？

1 1.1 嗯。

In: 是新生。Oh 不錯啊。Oh 我先解釋一下。我們這個研.....uh 研究只是要研究一下說話。他們.....這個教授是想知道一個人看了一場電影以後，怎麼把這個電影告訴一個還沒有看過這個電影的人。你有.....你有幾個問題，是不是？這.....我還沒有看過這個電影，所以我很想知道。請你告訴我一下妳看的怎麼樣。那個電影是什麼樣的電影？

2 2.1 uh 就是它是講一個.....種樹的人現在生.....摘芭樂。

3 3.1 那個是芭樂吧？

4 4.1 然後那個.....結果有一個小孩子經過，

4.2 然後偷了一隻芭樂。

5 5.1 騎著腳踏車的時候 um 偷了一隻芭樂。

6 6.1 然後，

6.2 走到路上的時候，

6.3 擦身而過一個女孩，

6.4 他就看了她一眼。

7 7.1 結果撞到石頭上，

7.2 車子就倒了。

8 8.1 結果芭樂跌得滿地都是。

9 9.1 然後後來旁邊有三個.....旁邊玩的那個小.....小男孩就幫他撿芭樂。

10 10.1 然後那個.....他就把.....撿好以後，

10.2 他就推車子走。

11 11.1 "嘩啦"那個帽子吹到地上了。

12 12.1 然後那.....其中.....他們已經回頭過.....走了。

13 13.1 就有一個小男孩就再撿.....再到帽子還給他。

14 14.1 結果他就謝謝他們，

14.2 就送他們三個芭樂。

- 15 15.1 結果那三個小孩子，
15.2 小男孩，
15.3 繼續往他原來走.....來的路上走。
- 16 16.1 結果，
16.2 吃芭樂嘛。
- 17 17.1 結果那個農夫從樹上下來，
17.2 一看怎麼少了一籃。
- 18 18.1 結果發覺那三個小孩子經過的時候吃芭樂。
- 19 19.1 就好像很疑惑的看著他們。
- 20 20.1 就這樣子。

END

Appendix 2

A: Native Speaker

No.	situation	grounding	discourse marker	stative	telic	durative	grammatical marking
2.1	<i>jiushi ta shi jiang</i> just it is about <i>yige zhong shu de ren xianzai zhai bale</i> one plant tree ASS person now pick pear	P B2		n	a	d	
3.1	<i>nage shi bale ba?</i> That be pear SFP	B6		s	a	d	
4.1	<i>jieguo you yige xiao haizi jingguo</i> as a result have one little kid pass by	F	All	n	t	d	
4.2	<i>ranhou tou le yi lou bale</i> and then steal LE one basket pear	F	All	n	t	d	L
5.1	<i>qi zhe jiaotache de shihou um</i> ride ZHE bike ASS when	B2		n	a	d	ZHE
	<i>tou le yi lou bale</i> steal LE one basket pear	/					L
6.1	<i>ranhou,</i> then	/					
6.2	<i>zoudao lu shang de shihou,</i> arrive road on ASS when	B7	A21	n	t	p	
6.3	<i>cashen erguo yige nuhai</i> pass one girl	F	All	n	t	p	
6.4	<i>ta jiu kan le ta yi yan.</i> He then see LE her one glance	F	All	n	t	d	L
7.1	<i>jieguo zhuangdao shitou shang,</i> as a result hit rock on	F	All	n	t	p	
7.2	<i>chezi jiu dao le.</i> Bike then fall LE	F	All	n	t	p	L
8.1	<i>jieguo bale die de man di dou shi</i> As a result pear fall RM full ground all be	F	All	n	t	p	

9.1	<i>ranhou houlai pangbian you sange...</i> then later nearby exist three <i>pangbian wan de nage xiao...</i> nearby play ASS that little	/					
	<i>xiao nanhai jiu bang ta jian bale</i> little boy then help him pick up pear	F	A11	n	a	d	
10.1	<i>ranhou nage..ta jiu ba..jian hao yihou,</i> then that he then BA pick done after	B7	A21	n	t	p	
10.2	<i>ta jiu tui chezi zou</i> He then push bike walk	F	A11	n	a	d	
11.1	<i>"huala" nage maozi chui dao dishang le.</i> "huala" that hat blow to ground LE	F	A13	n	t	p	L
12.1	<i>..tamen yijing hui guo tou..</i> they already turn around head..	B3	A22	n	t	p	
	<i>zou le</i> Leave LE	B3	A22	n	t	p	L
13.1	<i>jiu you yige xiao nanhai jiu zai jiandao maozi</i> then again one little boy then again found hat	F	A11	n	t	p	
	<i>huan gei ta</i> return to him	F		n	t	d	
14.1	<i>jiieguo ta jiu xiexie tamen,</i> as a result he then thank them	F	A11	n	t	p	
14.2	<i>jiu song gei tamen sange bale.</i> Then give to them three pear	F	A11	n	t	d	
15.1	<i>jiieguo na sange xiao haizi</i> as a result those three little kids	/					
15.3	<i>jixu</i> keep	F	A11	n	a	d	
	<i>wang ta yuanlai zoulai de lushang zou</i> towards he originally come ASS road walk			n	t	d	
16.1	<i>jiieguo,</i> as a result	/					
16.2	<i>chi bale ma</i> eat pear SFP	B2		n	a	d	
17.1	<i>jiieguo nage nongfu cong shushang xialai</i> as a result that farmer from tree come down	F	A11	n	t	d	
17.2	<i>yikan</i> one look	F		n	t	d	

	<i>zenme shao le yi lou.</i> How come miss LE one basket	/		s	a	d	L	
18.1	<i>jieguo fajue</i> as a result find	F	All	n	t	p		
	<i>na sange xiao haizi jingguo de shihou</i> those three little kids pass ASS when				n	t	d	
	<i>chi bale.</i> Eat pear				n	a	d	
19.1	<i>jiu haoxiang hen yihuo de kan zhe tamen.</i> Then seem very confused MA look ZHE them	F	All	n	a	d	ZHE	
20.1	<i>jiu zhe yangzi.</i> That is it	P		s	a	d		

Appendix 3

English - mid

629- 73 = 556

- 1 yi ge, nan ren, ta: uh ta: shang, yi ge shu. -V
- 2 uh na shui guo. -V
- 3 -- uh - ta you ta you san ge lan. -V
(lan zi) -V
- 4 liang ge you shui guo- shui guo. -V
- 5 yi ge mei you. -V
- 6 mhm. -V
- 7 uh --- ta zai shu na shui guo de shi hou. -V
- 8 di er ge nan ren - uh guo: guo: zen me shuo guo lai. -V
- 9 ta di er ge nan ren you yi ge ya- yang. -V
- 10 uh yang uh kan dao shui guo. -V
- 11 ke shi yang bu chi. -V
- 12 uh ---- zhe ge ren zai shu, ta: xia lai. -V
- 13 fang shui guo zai lan. -V
- 14 uh yi hou ta zai shang shu. -V
- 15 ta zai shu de shi hou -V
- 16 yi ge nan hai zi (de) uh -- ji ta- ji ta che, ji ta che? -V
- 17 dui ta dui? -V
jiao ta che. -V
jiao? -V
jiao ta che. -V
jiao ta che. -V
mhm. -V
- 18 nan hai zi (de) jiao ta che, kan uh kan dao zhe ge uh uh lan de shui guo. -V
- 19 ta: uh ta kan nan ren zai shu. -V
- 20 uh ta zhi dao -V

13 nan ren bu hui bu hui kan ta.

24 suo yi ta: uh ta na qi- na qi lai yi ge lan.

25 fang zai ta de jiao ta che.

26 ta hen kuai uh hen kuai zou.

qi zou

27 dui.

28 hen kuai qi zou.

29 uh ta: ta: - (di yi ge) lan hen zhong.

mhm.

30 ta: uh ta ta kan

31 ta de jiao ta che you yi dianr wen ti.

32 bu tai rong yi.

33 mhm.

34 uh -- bie de hai zi yi nu hai zi / zuo jiao ta che, / uh dui ta dui ta qi qi.

35 uh - ta: zhe ge nu hai zi guo ta.

36 ta: uh ta: nan- nan hai zi kan nu hai zi.

37 ta de mao zi uh ta de mao zi uh ((laughter))

((nothing audible, perhaps gestures that hat falls))

38 dui ta de mao zi diao- diao le.

39 uh ta: ta kan zai hou tou.

40 ta de jiao ta che peng yi ge uh shi: =

=shi tou.

41 shi tou.

42 ta: ---- ta: - tia- tiao xia

43 zen me shuo?

uh

(diao xia)

- V -

- V -
- V -
- V -
- V -

- V -

- V -

- V -

- V -
- V -

- V -
- V -

- V -
- V -
- V -

- V -

- V -

44 diao xia lai. ^{seg}

45 dui.

46 lan- lan de shui guo ye diao. ^{seg}

47 shui guo uh ((laughter)) ^{47.1} shui guo dou ^{47.2} zai / zai lu. -V

xxx

48 mhm.

-V 49 uh san ge nan hai zi lai. ^{present} -V

50 bang ta zhan qi lai. ^{seg}

-V 51 ta: ta de tui hen teng. -V

52 san- san ge bie de nan hai zi uh na qi lai 1- uh lan. -V

53 uh ba shui guo fang- fang zai lan. ^{seg} -V

54 an tang ta: uh ba lan de shui guo fang zai ta de jiao ta che. -V

55 an - uh an then san- san ge san ge nan hai zi zou- zou. -V

56 ke shi ta men kan dao bie de nan hai zi de mao zi. -V

57 suo yi yi ge nan hai zi uh na qi lai mao zi. -V

58 uh gei gei nan hai zi - nan hai zi dui ta men uh -- dui ta men xie xie ta. -V

59 ba san ge shui guo gei ta men san ge nan hai zi. -V

60 an- nan hai zi / gen - uh di yi ge nan hai zi / ta ta uh na jiao ta- jiao ta che. -V

61 zou lu. -V

62 ta bu yao zuo zuo jiao ta jiao ta che. -V

63 bie de san ge nan hai zi ta men zou uh dui nan uh nan ren zai shu. -V

64 mhm. -V

65 ta men uh- nan ren ta cong shu xia lai. -V

66 kan dao ta yi ge ta de yi ge lan uh you de ren tou tou: -V

tou zou. ↑

should be bu

67 tou zou.

68 dui.

69 ta hen hu li hu tu. ((laughter))

70 san ge nan hai zi ⁷⁰¹ guo lai / guo lai ta.

71 ta men yi ge nan zai chi yi ge shui guo.

72 nan ren kan dao zhe ge, zhe ge nan hai zi.

73 ta: ta bu zhi dao zen me yang.

Appendix 4

English-Mid 1: 556

No.	situations	grounding	discourse marking	stativity	telicity	durativity	grammatical marking
1	<i>yige nanren ta shang yi ge shu</i>	F		n	t	d	
2	<i>na shuiguo</i>	/					
3	<i>ta you san ge lan</i>	B4		s	a	d	
4	<i>liangge you shuiguo</i>	B4		s	a	d	
5	<i>yi ge meiyou</i>	B4		s	a	d	
7	<i>ta zai shu na shuiguo de shihou</i>	B2	A21	n	a	d	
8	<i>di er ge nanren guo lai</i>	F		n	t	d	
9	<i>ta di er ge nanren you yi ge yang</i>	B4		s	a	d	
10	<i>yang kan dao shuiguo</i>	F		n	t	p	
11	<i>keshi yang bu chi</i>	F	/	s	a	d	
12.1	<i>zhe ge ren zai shu,</i>	B4		s	a	d	
12.2	<i>ta xialai</i>	F		n	t	d	
13	<i>fang shuiguo zai lan</i>	F		n	t	d	
14	<i>yihou ta zai shang shu</i>	F	A11	n	t	d	
15	<i>ta zai shu de shihou</i>	B7	A21	s	a	d	
16	<i>yi ge nan hai zi zuo jia ta che</i>	B2		n	a	d	
17	<i>dui bu dui?</i>	M					
20.1	<i>nan hai zi de jiaotache,</i>	/					
20.2	<i>kan dao zhe ge lan de shuiguo</i>	F		n	t	p	
21	<i>ta kan nanren zai shu</i>	F		n	t	p	
22	<i>ta zhi dao</i>	F		s	a	d	
23	<i>nan ren bu hui kan ta</i>	B5		s	a	d	
24	<i>suoyi ta na qi lai yi ge lan</i>	F	A11	n	t	d	
25	<i>fang zai ta de jiao tache</i>	F		n	t	d	
26	<i>ta hen kuai hen kuai zou</i>	F		n	t	p	
27	<i>dui,</i>	/					

28	<i>hen kuai qi zou</i>	/				
29	<i>ta di yi ge lan hen zhong</i>	B4		s	a	d
30	<i>ta kan</i>	/				
31	<i>ta de jiao ta che you yi dian'r wen ti</i>	B4		s	a	d
32	<i>bu tai rongyi</i>	B5		s	a	d
34.1	<i>biede haizi yi nu haizi,</i>	/				
34.2	<i>zuo jiao tache</i>	B2		n	a	d
34.3	<i>dui ta qi</i>	B2		n	a	d
35	<i>ta zhe ge nuhaizi guo ta</i>	F		n	t	d
36	<i>na nan haizi kan nu haizi</i>	F		n	a	d
37	<i>ta de maozi uh tade maozi</i>	/				
38	<i>dui, ta de maozi diao le</i>	F		n	t	p L
39	<i>ta kan zai houtou</i>	F		n	a	d
40	<i>ta de jiao ta che peng yi ge shitou</i>	F		n	t	p
41	<i>shitou.</i>	/				
42	<i>ta tiao xia</i>	/				
43	<i>zenme shuo?</i>	M				
44	<i>ta diao xia lai</i>	F		n	t	p
46	<i>lan de shuiguo ye diao</i>	F		n	t	p
47.1	<i>shuiguo dou zai,</i>	F		s	a	d
47.2	<i>zai lu</i>	/				
49	<i>san ge nan haizi lai</i>	F		n	t	d
50	<i>bang ta zhan qilai</i>	F		n	t	d
51	<i>ta de tui hen teng</i>	B2		s	a	d
52	<i>san ge bie de nan haizi na qilai lan</i>	F		n	t	d
53	<i>ba shuiguo fang zai lan</i>	F		n	t	d
54	<i>"an" bang ta ba lan de shuiguo fang zai ta de jiao tache</i>	F	A	n	t	d
55	<i>"and then" san ge nan haizi zou</i>	F	A	n	a	d
56	<i>keshi tamen kandao bie de nan haizi de maozi</i>	F		n	t	p
57	<i>suoyi yige nan haizi na qilai maozi</i>	F	All	n	t	d
58	<i>gei nanhaizi</i>	F		n	t	d
	<i>nan haizi dui tamen xie xie ta</i>	F		n	t	p
59	<i>ba san ge shuiguo gei ta men san ge nan haizi</i>	F		n	t	d
60.1	<i>an- nan haizi,</i>	/				

60.2	<i>di yi ge nan haizi,</i>	/					
60.3	<i>ta na jiao tache</i>	B4		n	a	d	
61	<i>zou lu</i>	F	A	n	a	d	
62	<i>ta bu yao zuo jiaotache</i>	B5		s	a	d	
63	<i>bie denan haizi tamen zou</i>	F		n	a	d	
	<i>uh dui nan ren zai shu</i>	B4		s	a	d	
65	<i>nanren ta cong shu xia lai</i>	F		n	t	d	
66	<i>kandao</i>	F		n	t	p	
	<i>tade yige lan you ren tou</i>	/					
67	<i>tou zou</i>	/					
69	<i>ta hen hulihutu</i>	F		s	a	d	
70.1	<i>san ge nan haizi guo lai ta</i>	F		n	t	d	
70.2	<i>guo lai ta</i>	/					
71	<i>tamen yi ge nan haizi chi yige shuiguo</i>	B2		n	t	d	
72	<i>na ren kandao zhe ge nan haizi</i>	F		n	t	p	
73	<i>ta bu zhidao zenmeyang</i>	B5		s	a	d	

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