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A Semantic Description of Aspectual and Temporal Reference
in Chinese

by

Yee-Kim Szeto

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presented to the University of Ottawa
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in

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ABSTRACT

The concept of time plays an important role in the semantic characterization of any language. In this thesis, I will provide a semantic description of Chinese with respect to the notion of time. First, I will make a distinction between the external and internal time reference of a sentence. The internal time reference is further divided into two parts: aspect and aktionsart. The former concerns the way a speaker chooses to present a situation in relation to time, whereas the latter concerns the inherent temporal nature of a situation.

The purpose of this thesis is to describe the essential facts with regard to aspect and aktionsart in Chinese, and relate these facts to a general description of Chinese sentences. The major part of this thesis will be devoted to a description of Chinese sentences from the standpoint of aktionsarten.

In this thesis, I touch on a wide range of topics pertaining to the system of aktionsarten in Chinese. In particular, I explore the semantic distinction between English and Chinese verbs in terms of the inherent temporal properties involved. Essentially, the difference between English and Chinese verbs can be characterized as 'vectorial' versus 'scalarial'. In English, an event referred to in a sentence is conceived of as 'progressing' in a direction, i.e., from one stage to another in a time sphere. Hence, English has a 'directed' verb content. In Chinese, an event is conceived of as being confined in a time sphere. That is, it is treated as a 'self-enclosed' unit of happening, which can be viewed as a whole in its entirety or as condensed. Therefore, Chinese has a 'non-directed' verb content.

The 'vectorial-verb' versus 'scalarial-verb' distinction has far-reaching implications in the characterization of the system of aktionsarten in a language. Because of its 'non-directed' verb content, Chinese resorts more to 'lexical' means in the expression of different types of situations (i.e., aktionsart meanings). As a result, there exists a one-to-one correspondence between syntactic and semantic structure in a sentence. That is, in Chinese, semantic (or conceptual) structure is directly represented in syntactic structure.

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Chapter I

GENERAL BACKGROUND

1.1 Basic Notions

The concept of time is of central importance for the semantic description of any language. In fact, the concepts of space and time with regard to their relevance in the description of the relation between events have attracted the attention of philosophers for a long time. For example, it has been asserted that "space and time are merely ways of expressing certain truths about the relation between events".[1] The philosophical import of spatial and temporal relations, though it is of theoretical interest, need not concern us here. Galton (1976) in this connection has given some very revealing remarks on the notion of time in relation to events. According to him, there are only two temporal relations between events, namely, '*simultaneity*' and '*succession*'. And the notion of time used to characterize events means nothing but '*succession*'. He added that "the flow of time, to be perceived by us, does not only require a succession of changing events, but also a background of unchanging states against which the former can be set. Unchanging states and changing events lie, therefore, at the basis of our perception of time. It is, of course, not time which changes, but the events arranged in it; time is merely the principle of that arrangement" (1976:10).

This description of the notion of time in connection with events suggested by Galton is extremely useful for our understanding of the general meaning and function of the aspect markers in Chinese, which will be dealt with in the next chapter. In this chapter I first discuss briefly three basic notions - tense, aspect, and aktionsart - which concern the analysis of the system of aspectual and temporal reference in Chinese.

To start with, we have to make a distinction between internal and external time reference of a sentence. According to Platzack (1979), the external time reference of a sentence, usually indicated by the grammatical category of tense, relates the time of the production of the sentence to the time of the situation described. The internal time reference, on the other hand, is dependent on the nature of the situation to which it is referred. As an illustration, the English sentences in (1) and (2) have different external time references, as indicated by the use of past tense in (1), and present tense in (2). However, the internal time reference is the same in both cases. Both (1) and (2) describe a situation where a specific kind of event is taking place, and both sentences indicate that this event comes to an end when 'he arrives at London'.

(1) He went to London.

(2) He is going to London.

The internal time reference of a sentence can further be divided into two parts: 'aspect' and 'aktionsart'. The former concerns the temporal perspective or point of view taken of a situation, whereas the latter concerns the inherent temporal nature of the situation named.[2]

Before proceeding, a word should be said to clarify the term 'situation' as it is used in the linguistic literature. The term 'situation' is, for the most part, taken for granted by most linguists. In Comrie (1976) the term 'situation' is used as a cover-term. Thus, a situation may refer to a state, an event, or a process. But, as Platzack (1979:118) points out, it is of theoretical import to differentiate the 'conception of situations' that is reflected in language from the 'situations' themselves. In other words, the term 'situation' used in linguistic expressions refer only to our 'conception of the situation' rather than the 'situation' as such.

As we all know, sentences are used to describe various kinds of situations, concrete and abstract. Furthermore, situations can be viewed from different angles, and this constitutes the basis for our interpretation of aspect and aktionsart. However, the notions of 'aspect' and 'aktionsart' should be kept apart. In addition, the criterion that is used to separate 'aktionsart' from 'aspect' in this thesis is the notion of 'change'. The presence versus absence of 'change' constitutes our conception of the situation (cf. Plat-zack, 1979). In other words, the notion of aktionsart has to do with the inherent temporal constitution of a situation. Hence, aktionsart values can be defined in terms of the types of situation referred to. The notion of aspect indicates the way a speaker chooses to present a situation in relation to time. Hence, aspectual values are defined in terms of the speaker's view of the situation.

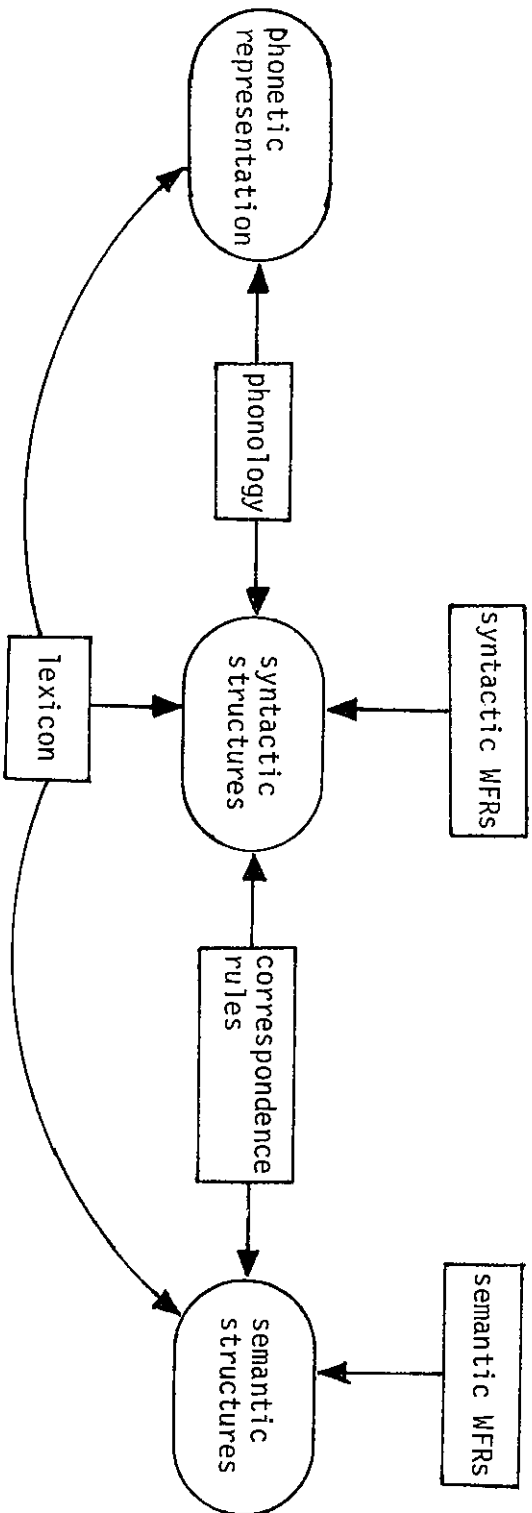
The separation of aspect from aktionsart will enable us to give a more coherent description of Chinese, especially with regard to the functions of the aspect markers, which will be considered in Chapter 2. The category of aspect will play a less prominent role in our discussion of the semantic issues in the chapters that follow, and the body of this thesis will be devoted to a description of Chinese from the standpoint of 'aktionsarten'.

1.2 Theoretical Background

In this section I will give a brief description of Jackendoff's (1978, 1983) theory of conceptual semantics, which will be adopted as the theoretical framework in this thesis.

The overall picture of Jackendoff's (1983) model of grammar can be roughly represented as follows:

(3)



(Rectangles represent rule components and stored lexical information; ellipses represent types of structure generated by or affected by rule systems.)

The syntactic well-formedness rules include phrase structure rules, transformations, etc.. The lexicon contains a list of the words in the language with their syntactic, semantic, and phonological properties, plus rules of word-formation that both account for morphological and semantic relationships among lexical items and allow for creation of new lexical items. The semantic well-formedness rules contain the inventory of semantic primitives and the principles for combining them.

Within this model, the syntactic well-formedness rules and the lexicon together determine a set of syntactic structures, where each member of this set is to be conceived of as a complete derivation from underlying structure to surface structure.

In Jackendoff's (1978, 1983) view, the grammatical structure of natural language provides a new source of evidence for the theory of cognition. Of particular interest in this model of grammar is the non-autonomy of semantics. Jackendoff (1983:105) argues that semantic and conceptual structures "collapse into a unified level, and syntactic form is mapped by the correspondence rules directly into conceptual structure, without an intermediate level that account for purely linguistic inference". In other words, the semantic (or conceptual) well-formedness rules are concerned with the question of meaning, whereas the correspondence rules are concerned with the mapping between syntactic structure and semantic (or conceptual) structure.

What concerns us here is the question of the levels involved in the semantic description of a sentence. According to Woisetschlaeger (1976), and following him, Platzack (1979), there are two levels of semantic content related to the interpretation of sentences.

I) THE LEVEL OF BARE PROPOSITIONAL CONTENT (OR SEMANTIC REPRESENTATION)

A semantic description of a sentence on this level defines what kind of situation it can be used to describe, but without this description being related to the world.

II) THE TMA (TENSE, MOOD, AND ASPECT) COMPONENT

This component takes the bare propositional content as its input; the output is the final semantic structure of the sentence, specifying its use as an assertion, a question, a command, etc.. In particular, information concerning tense, mood, and aspect is dealt with on this level. In a word, this component "specifies the conditions under which a sentence purports to correspond to situations in the real world" (Jackendoff, 1972:3).

The distinction between the bare propositional content of a sentence and the TMA component is of utmost importance for our study of aspect and aktionsart in Chinese. The category of aktionsart is related to the bare propositional content, whereas the category of aspect is related to the TMA component.

First, let us deal with the category of aspect in Chinese. As we noted in Section 1, the notion of aspect is defined as referring to the way a speaker chooses to present a situation in relation to time. Hence, aspectual meanings can be taken as the temporal relations quantitatively defining events in relation to time. In this regard, the role played by the aspect markers in Chinese can be said to map the relation between the syntactic structure and the semantic system dealing with tense, mood, and aspect. However, the aspect markers in Chinese have been insufficiently studied. In addition, most analyses found in the literature (e.g., Chao, 1968; Chan, 1980; Li & Thompson, 1981a; among others) treat the aspect markers as the property of the verb. This is due largely to the fact that some of the aspect markers such as e.g., 'le₁' (the perfective aspect marker), 'guo' (the experiential aspect marker), 'zai' and 'zhe' (the durative

aspect markers), are attached to the verb in the syntactic structure, as shown in (4).

As such, these morphemes are regarded as verbal suffixes by Chinese linguists.

- (4) a. Wo kan le₁ nei-ben xiao-shuo
 I read le₁ that-cl. novel
 'I read/have read that novel.'
- b. Wo kan guo nei-ben xiao-shuo
 I read guo that-cl. novel
 'I have read that novel.'
- c. Ta zai chang-ge
 she zai sing-song
 'She is (in the process of) singing.'
- d. Ta chuan zhe yi-shuang hen piao-liang
 she wear zhe one-cl. very pretty
 de xie-zi
 Poss. shoe
 'She is wearing a pair of pretty shoes.'

Despite the fact that these aspect markers are suffixed to the verb in surface realization, they should not be taken as properties of the verb. Rather, they should be characterized as properties of the entire sentence. To give a concrete illustration, consider the sentences in (5).

- (5) a. Wo kan le₁ zhe-ben shu
 I read le₁ this-cl. book
 'I read/have read this book.'
- b. Wo kan-wan le₁ zhe-ben shu
 I read-finish le₁ this-cl. book
 'I finished/have finished reading this book.'

Both the (a) and (b) sentences in (5) include the perfective aspect marker 'le₁', which is generally defined as referring to a 'completed' action (e.g., Chao, 1968). If the perfective aspect marker le₁ is taken as the property of the verb as such, the (a) and (b) sentences in (5) should be interpreted in the same way semantically. Nevertheless, this is not the case. They differ in semantic interpretation. While (5b) specifies the endpoint achievement of an event, (5a) has no such implication, and only states that an event took place.

An essential fact to notice about (5b) is that it comprises a compound verb 'kan-wan' ('read-finish'), the second part of which indicates explicitly the termination of the action. Therefore, the distinction between the (a) and (b) sentences in (5) consists not so much in the fact that they both include the aspect marker le_1 as in the fact that they have different inherent temporal properties (i.e., aktionsarten). Seen in this light, the perfective aspect marker le_1 has nothing to do with the property of the verb, but rather with the temporal perspective taken by the speaker with regard to the situation, i.e., with the property of an entire sentence.

In the present thesis, the aspect markers in Chinese are treated as being related to the TMA (tense, mood, and aspect) component, and they are realized syntactically under the 'auxiliary' system. The elements generated under the category 'AUX' have no effect on the internal structure of the bare propositional content (or semantic representation) of a sentence. As a result of this orientation, we can offer a more general characterization of the aspectual system in Chinese. This will be considered in the next chapter.

Next, Jackendoff's (1983) theory of conceptual semantics is extremely relevant to the description of the level of bare propositional content of a sentence. In its essentials, the theory of conceptual semantics developed in Jackendoff (1983) takes the position that the semantic structure of a sentence is built up from a hierarchical arrangement of conceptual constituents, each of which belongs to a major ontological category or 'semantic parts of speech' such as THING, PLACE, EVENT, STATE, MANNER, and PROPERTY. Conceptual constituents are realized syntactically by means of major phrasal constituents such as NP, S, PP, AP, and Adv P. Furthermore, the correspondence of semantic (or conceptual) to syntactic categories is governed by markedness conventions. For instance, the unmarked realization of THING is NP; the unmarked realization of PROPERTY is AP; the unmarked realization of EVENT is S.

The relation of syntactic to conceptual (or semantic) constituent structure can be illustrated with the English examples such as (6) and (7).

(6) a. Syntactic structure

[John [went [to London]]]
S VP PP

b. Conceptual structure

[GO ([John], [TO ([London])])]
Event Thing Path Place

(7) a. [Mark [is [in the library]]]
S VP PP

b. [BE ([Mark], [IN ([the library])])]
State Thing Place

In (6b) the Event-function GO takes two arguments. The arguments of GO, which indicate motion along a path, are the [THING], and the [PATH] it traverses. In (7b) the State-function BE specifies the location of the object.

As we mentioned in the foregoing section, the notion of aktionsart concerns the inherent temporal constitution of a situation, and aktionsart meanings are specified in terms of the types of situation to which they refer. Let us first consider the following English sentences.

(8) John walked to the station.

(9) John walked towards the station.

(8) refers to a 'bounded' process in the sense that the terminal point has been reached, whereas (9) refers to an 'unbounded' process. The difference between (8) and (9) can further be seen in the fact that the durational adverbial 'in X time' occurs only with the former, while on the contrary, 'for X time' occurs only with the latter, as shown in (10) and (11) respectively.

(14) refers to a 'bounded' process, whereas (15) refers to an 'unbounded' process. The salient characteristic of the Chinese sentences in (14) and (15) is that the semantic content, to a large extent, is explicitly indicated in the syntactic structure, viz., through the lexical means or through the word order of the spatial expression. For instance, the spatial expression 'wang huoche-zhan' ('towards the station') in (15a) occurs pre-verbally, restrictively modifying the action 'zou' ('walk') represented by the Event-function GO in (15b).

The Chinese sentence in (14) merits special attention. One fact to note about (14) is the internal structure of the compound verb 'zou-dao' ('walk-reach'), which is composed of two parts. The first part of the compound indicates the action, whereas the second part indicates the 'goal (or endpoint achievement)' of the action.

In this regard, compound verbs in Chinese offer an interesting example of the 'compositional' nature of a sentence in relation to the interpretation of its inherent temporal nature (i.e., aktionsart). Two types of compound verbs will be presented for detailed study in this thesis. The first type is the verb-object compound, as shown in (16).

- (16) a. zhao-xiang
take-picture ('to photograph')
- b. kai-che
operate-car ('to drive')
- c. qi-ma
ride-horse ('to ride')
- d. kan-shu
look-book ('to read')

The characteristic features of this type of verb-object compounds are as follows: the verb belongs to the category of action (or process) verbs, and the 'object' of the compound is taken as being incorporated into the verb. An important fact to notice about

this type of verb compounds is that the verb of the compound has been relegated to the status of referring only to the performance of the action denoted by the verb itself. The 'compositional' nature of the compound is such that the interplay of verbal and nominal features plays a significant role in the interpretation of the inherent temporal properties of the compound as a whole. This type of verb-object compounds indicates an 'atelic' (or 'unbounded') verb content. The semantic issues involved in this type of verb compounds will be discussed in Chapter 4.

The second type is the resultative verb compound, as shown in (17) and (18) respectively.

- (17) a. da-po
hit-fracture ('break')
- b. nong-zang
make-dirty
- c. ti-shang
kick-injure
- (18) a. kan-wan
look-finish ('finish reading')
- b. zhao-dao
look for-reach ('find')
- c. xiang-chu
think-emerge ('think out')

Resultative verb compounds are also composed of two parts: the first part refers to the kind of action involved, and the second part indicates the result of the action expressed by the first verb. The internal structure of resultative verb compounds, just like that of verb-object compounds, is of an 'analytical' nature in the sense that the meaning of the compound as a whole is built up from its parts. The semantic issues involved in this type of verb compounds will be dealt with in Chapter 5.

1.3 Plan of the Thesis

This thesis is organized as follows:

The second chapter deals with the system of temporal reference in Chinese. Basically, the discussion revolves around two issues: a) how the notion of 'temporal' reference should be interpreted in Chinese, and b) the role played by the aspect markers in relation to the temporal specification. I will propose a 'localistic' approach to the aspect markers in Chinese. The aspect markers in Chinese actually play a dual role - temporal and aspectual - in defining the temporal specification of a sentence. The main function of the aspect markers in Chinese is to establish the anchoring point of an event on the time axis. In other words, they function as event-modifiers, indicating the distribution of an event in time.

Chapter 3 investigates the semantic structure of verbs in Chinese with respect to the notion of aktionsart. In particular, I attempt to explore the inherent temporal differences between English and Chinese verbs. Essentially, English is characterized as a 'vectorial-verb' language, whereas Chinese is characterized as a 'scalarial-verb' language. Verbs in English are 'directed' in the sense that the action is conceived of as reaching somewhere in a time sphere. Verbs in Chinese, on the other hand, are 'non-directed' in the sense that the action is conceived of as being confined inside a time sphere. Finally, I put forward a two-system classification of verbs in Chinese in terms of the notion of 'change' involved in a situation.

In the fourth chapter, I present an analysis of the semantic issues involved in the verb-object compounds in Chinese. In particular, I examine in detail two issues bearing on the verb-object compounds. The first concerns one group of verb-object compounds that correspond semantically to the class of 'object-deletion' verbs in English.

The second concerns the verb reduplication construction that involves verb-object compounds. I hold that the reduplication of the verb in the verb reduplication construction is semantically motivated. In Chinese, there exists a one-to-one correspondence between the syntactic ordering of modifiers and the semantic scope of modification.

Chapter 5 is concerned with the semantic issues related to the resultative verb (RV) compounds in Chinese. RV compounds are divided into two groups - 'lexicalized' vs 'grammaticalized' RV compounds. The internal structure of 'lexicalized' RV compounds shows a 'cause-result' relationship between the first and the second verb of the compound. I argue that fundamental to the analysis of the 'causal relation' involved in the 'lexicalized' RV compounds in Chinese are two concepts - action and event. In addition, the concept of 'causation' indicates nothing more than the interlinking of the action with the event that arises from the performance of that action. On the other hand, the characteristic feature of the group of 'grammaticalized' RV compounds consists in the fact that the second verb functions as a marker of 'telic' aktionsart in the sense that it adds the concept of endpoint to an 'unbounded' situation represented by the first verb. Finally I will present a detailed investigation of the particles that function as aktionsart markers.

In chapter 6, I concentrate on the semantic issues related to BA-construction in terms of the intrinsic temporal properties involved. On the whole, the BA-construction has the following two characteristic features: a) it is mainly associated with a temporally bounded event, and b) the function of the marker 'BA' is to mark 'object boundedness'. The semantic issues pertaining to the BA-construction have to do directly or indirectly with these two semantic conditions.

Since my main concern in the present thesis is to investigate the semantic problems in several important areas of Chinese grammar from the standpoint of aktionsart, i.e.,

the intrinsic temporal nature of a sentence, I shall keep the discussion of syntax involved in the Chinese constructions to the minimum.

Footnotes to Chapter I

- [1] A.N. Whitehead (1964). *The concept of Nature*, P. 168.
- [2] Brinton (1985) lists the following pairs of terms found in the linguistic literature corresponding to the aspect/aktionsart distinction.

'aspect' versus 'character';

'grammatical' versus 'lexical' aspect;

'subjective' versus 'objective' aspect;

'viewpoint' versus 'situation' aspect.

Chapter II

ON ASPECTUAL AND TEMPORAL REFERENCE IN CHINESE

2.1 Introduction

The system of temporal reference is a very complex topic in Chinese grammar. In this chapter I attempt to investigate the temporal function of the aspect markers in Chinese. First, I will deal with the basic notions in connection with the interpretation of aspect and tense and their relevance in the characterization of temporal reference in Chinese. In this regard, Reichenbach's theory of tense will be briefly discussed. Next, the system of temporal reference in Chinese will be touched upon. For the most part, I will address two essential issues: how the notion 'temporal reference' should be interpreted, and the interplay of aspectual and temporal reference in Chinese. Finally, I will give a detailed analysis of the main functions of the aspect markers in Chinese.

2.2 The Representation of Tense

As we mentioned briefly in Chapter 1, the notion of 'tense' is related to the external time reference. 'Tense' in this connection should be differentiated from 'time'. Typically, tense is a grammatical category and is mainly concerned with the temporal location of situations relative to the time of speech. For example, Comrie (1985:10) takes 'tense' to be defined as "the grammaticalization of location in time". According to Comrie, location in time can either be grammaticalized or lexicalized. 'Grammaticalization' refers to integration into the grammatical system of a language, whereas 'lexicalization' refers merely to integration into the lexicon of a language. He further

points out that where languages express location in time by means of grammatical categories - tense being one of them - there are heavy constraints imposed on the range of expressions of location in time that can be grammaticalized. Of these constraints, he lists the following (1985:10):

- a) the representation of tense in terms of the notion of 'deictic' centre,
- b) location at before or after the deictic centre, and
- c) distance from the deictic centre.

For the representation of 'tense', some arbitrary reference point in the time line is first established, with reference to which we can locate situations in time. In most cases, the speech situation is chosen as the reference point. Comrie (1985:14) argues that a system which relates entities to a reference point is termed a deictic system, and thus tense can be viewed as 'deictic' (cf. Lyons, 1977).

The speech situation, i.e., the here and now, is the most basic deictic centre. Hence, what is crucial to all tense specifications is the requirement for a deictic centre or reference point. And the deictic centre for tense is, by and large, a single point in time. Based on the establishment of a single point in time, Comrie (1985) draws upon this as a criterion and makes a distinction between 'absolute' and 'relative' tense. The term 'absolute tense' is used to refer to a tense which takes the present moment as its deictic centre, i.e., the reference point of the location of a situation. Given the present moment as the deictic centre, there are three basic tenses, namely, past, present and future, included in the absolute tense. On the other hand, the term 'relative tense' is used to refer to a tense which does not include as part of its meaning the present moment as a deictic centre: that is, the reference point for the location of a situation is some point in time given by context, not necessarily the present moment.

In sum, in the 'absolute' tense system, events are viewed in relation to the deictic point, whereas in the 'relative' tense system, the relative point of time involving the notions of 'anteriority' or 'posteriority' in relation to the reference time plays a more prominent role.

The semantic values of verbal tenses were first taken up by Reichenbach (1947), who proposed a theory of temporal specifications. And, by means of diagrams, Reichenbach attempted to explain the phenomenon of tense in general. In Reichenbach's system of analyzing the meanings of verbal tenses, three points on the time axis are distinguished:

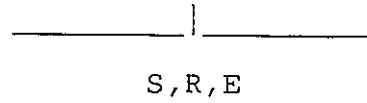
(1)

- a) the point of speech (S)
- b) the point of event (E)
- c) the point of reference (R)

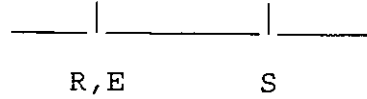
Of these three points, S is the most independent; R can only be placed in relation to S, and E is even more dependent, as it can only be placed in relation to R, which, in turn, is dependent on S. It must be emphasized here that E and S cannot be related to each other; E can be related to R, but not to S. As a corollary, every event is placed in time relation to R, and the different tense forms are distinguished by means of the above three points in Reichenbach's system. Reichenbach's scheme of English tenses is exemplified in (2):

(2)

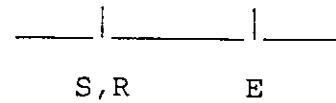
a. Present: I see John.



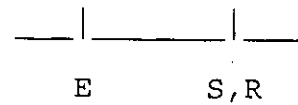
b. Simple Past: I saw John.



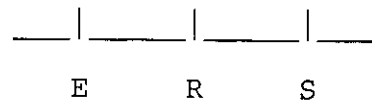
c. Simple future: I shall see John.



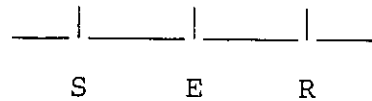
d. Present perfect: I have seen John.



e. Past Perfect: I had seen John.



f. Future perfect: I shall have seen John.



Reichenbach's system of tense can be characterized essentially as of a 'Boolean' nature in the sense that the interpretation of the relation of these three points is defined on the basis of two kinds of relations: overlapping and precedence.[1]

As Dahl (1985) pointed out, the reason that Reichenbach's system is of a Boolean nature is due to the fact that, in Reichenbach's system, "all tenses are supposed to be describable in terms of precedence relations between a finite set of points in time, and

thus, the characterization of a tense can be reduced to the conjunction of a set of propositions, chosen from among a finite set" (1985:30).

Another aspect of Reichenbach's theory of tense merits mention here. That is, the time points E, R and S must be interpreted as either stretches or points of time. Although Reichenbach treats everything under the label of 'tense', notions such as 'extended' and 'perfect' are concerned with states of events rather than with time points. Therefore, they seem to be different in nature from mere tense. They should be considered as aspectual, despite the fact that they also involve 'time points' to a certain extent. Dahl (1985) has mentioned that Reichenbach's scheme works best for cases involving single, punctual actions, which is due to the fact that the scheme basically only accounts for temporal reference and is not well suited for describing aspectual notions.

Reichenbach's system of tense, for all its shortcomings, has been taken as the standard description of tense, and in particular, the terminology used by him - the three time points E, R, and S - has become the standard set of terms in the linguistic description of temporal specifications. On the other hand, in view of the deficiency of Reichenbach's system, linguists have made various modifications of his system in an effort to overcome its inherent inadequacies. There exist two opposing views in the linguistic literature with regard to the modification of Reichenbach's system. The first view, held by a small number of linguists (e.g., Thelin 1978; Vikner 1985), claims that Reichenbach's uni-dimensional tense model should be replaced by a hierarchical model in that Reichenbach's analysis of tense overlooks the important hierarchical relations in the structure of tense meanings.[2] The second view, accepted by most linguists working in the field, basically takes as the starting point Reichenbach's system, but with further extensions and modifications. For example, Comrie (1981, 1985) suggests a revi-

sion of Reichenbach's system in which, among other things, there may be an unlimited set of reference points $R_1 R_2 \dots$ etc.

Having clarified the notion of 'tense', we turn now to another issue that bears on our discussion of the temporal reference in Chinese. That is, how the 'absolute tense' and the 'relative' tense should be treated within Reichenbach's system. As stated above, of the three points in Reichenbach's scheme, S is the most independent; R is dependent on S, and E, in turn, is even more dependent in that it can be placed only in relation to R. Thus, given that we know the relation E/R, and the relation R/S, we can deduce the relation E/S.

Binnick (1976:44) in this connection has identified the relation R/S with the notion of 'absolute' tense and the relation E/R with the notion of 'relative' tense (or aspect). He further pointed out that the relation E/R is basic despite the fact that 'tense' (i.e., absolute tense) is taken to refer to E/S. What the 'anterior' tenses have in common is the anteriority of E to R, not to S, and what all past tenses have in common is the anteriority of R to S.[3] For example, in English the ordering relation R/S is usually specified by 'absolute' tense markers, whereas the ordering relation E/R is not obligatory.

According to Smith (1977:44), S (i.e., Speech Time) is the keystone of the temporal system in English, in that R (i.e., Reference Time) is oriented to it. When R is simultaneous with S, it indicates Present time; when R precedes S, it indicates Past time; when R follows S, it indicates Future time. E (i.e., Event Time), on the other hand, is not specified if it differs from R, but the relation between the two is given, in that R is always available in the sentence. Smith claims that when E/R is specified, it can be done through the use of such prepositions as, e.g., 'before, after, at, etc.' as well as by the auxiliary 'have', which specifically marks 'relative anteriority'. To fur-

ther explain these two kinds of ordering relations in English, consider the following sentences in (3):

- (3) a. Tom swam at noon.
 b. Harry ate before noon.
 c. They had eaten all the cookies while you were away.

All the sentences in (3) are interpreted as referring to the Past. Hence, the ordering relation R/S has been specified in all these examples. In the case of (3a), R is further specified as 'noon' in the past; E is simultaneous with R as indicated by 'at'. In the case of (3b), R is past, noon; E precedes R as indicated by 'before'.

(3c), on the other hand, requires some explanation. Smith (1976, 1977) argued that the auxiliary 'have' in English functions as a relational element in time specification, indicating that E (i.e., Event Time) is anterior to R. R in (3c) is indicated by the time adverbial clause 'while you were away' (in the past); the auxiliary 'have' indicates that E precedes R.

What concerns us here is how the temporal specifications, if interpreted in terms of the three points within Reichenbach's scheme, should be established in Chinese. As we pointed out earlier, in the 'absolute' tense system, events are viewed in relation to the deictic point, whereas in the 'relative' tense system, the relative point of time involving the notions of 'anteriority' and 'posteriority' in relation to the reference time plays a more prominent role. English, as said, falls into the category of 'absolute' tense system. Hence, in English specification of the 'absolute' tense relation (R/S) is obligatory, while specification of the 'relative' tense relation (E/R) is optional.

Chinese, as opposed to English, falls into the category of 'relative' tense system. Thus, in Chinese the reference point for the location of a situation is some point in

time given by context, not necessarily the present moment. In addition, 'location in time' is not expressed by means of the grammaticalized 'tense' markers. To see the distinction between English and Chinese with regard to temporal specifications, let us contrast the English examples in (3) with their Chinese equivalents in (4):

- (4) a. Tom zhongwu you le₁ yong
 noon swim le₁
 'Tom swam at noon.' (=3a)
- b. Harry zhongwu-yiqian chi le₁ fan
 noon before eat le₁ rice
 'Harry ate before noon.' (= 3b)
- c. Ni li-kai de shi-hou, tamen yijing ba
 you leave time they already BA

 suoyou de cookie-bing dou chi-(guang) le₁
 all Poss. cookie-cake all eat-(empty) le₁

 'They had eaten all the cookies while you were
 away.' (= 3c)

While the English sentences in (3) are interpreted as referring to the past, their Chinese equivalents in (4) cannot be thus interpreted, in that the 'absolute' tense relation (R/S) is absent in the latter. Instead, the Chinese sentences in (4) can be taken as referring to the temporal relation of 'relative anteriority'. In the sentences of (4), the reference point R is indicated (explicitly) by the time adverbs: R in (4a) is indicated by the time adverb 'zhongwu' ('noon'); R in (4b) is indicated by the time adverb 'zhongwu yiqian' ('before noon'); R in (4c) is indicated by the time adverbial clause 'ni li-kai de shihou' ('while you were away').

One thing to notice about the sentences in (4) is that the aspect marker le₁ indicates that E is anterior to R. In this regard, the aspect markers in Chinese play a pivotal role in the characterization of temporal reference in Chinese, to which I will return in the next section.

(4c) calls for further clarification. An essential thing about (4c) is that the time adverbial clause 'Ni li-kai de shihou' ('while you were away') cannot occur after the second conjunct, as the unacceptable sentence in (5) shows:

- (5) *Tamen yijing ba suoyou de cookie-bing dou
 they already BA all Poss. cookie-cake all
 chi-(guang) le₁, ni li-kai de shihou
 eat-(empty) le₁, you leave time

This is due to the fact that the problem with regard to the ordering relation E/R is how the reference point R is to be established in a particular sentence, since it is not anchored in the sentence. In other words, R must be first established in order that E can be pinpointed in time. Taken in this way, the time adverbial clause 'ni li-kai de shihou' ('while you were away') in (4c) serves to establish the reference point R, to which E relates. The unacceptability of (5) consists in the fact that R has not been established in the sentence. As a result, E cannot be located in time.

On the basis of what we have said so far, it seems that in Chinese the ordering relation R/S is optional, whereas the ordering relation E/R is obligatory.

2.3 The System of Temporal Reference in Chinese

Having elucidated the basic notions pertaining to the description of temporal specifications, we can now proceed to the discussion of the system of temporal reference in Chinese.

In most of the descriptions of Chinese grammar, the system of temporal reference has been discussed either very little or not at all. This is due largely to the fact that the notion of 'temporal specification' has always been equated to the grammatical category of 'tense' by Chinese linguists. As a consequence of this misinterpretation, Chinese has been characterized as a 'tenseless' language by some linguists (e.g., Wang Li,

1944; M-K Gao, 1957; among others). If by 'tenseless' it is understood that the notion of 'temporal specification' is not grammaticalized in Chinese, then they are correct. But, if by 'tenseless' it is meant that the notion of 'temporal specification' does not exist in Chinese, then they are wrong. However, it has never been clear what these linguists had in mind when they remarked that Chinese is 'tenseless'. [4]

On the other hand, the category of 'aspect' is generally assumed by most linguists, and hence attention has been concentrated on the interpretation of the aspect markers. Most studies found in the literature on the subject of the aspect markers in Chinese (e.g., Chao, 1968; Chan, 1980; Teng, 1973; among many others) have focused on the functions of the markers in connection with the verb. The aspect markers are often treated as verbal suffixes.

Despite this fact, the role played by the aspect markers in relation to temporal reference in Chinese has so far received only scant attention from Chinese linguists. In this chapter I will attempt an alternative analysis of the aspect markers, and specifically examine the interplay of aspectual and temporal reference in Chinese. Before embarking on the discussion of the approach suggested in the present chapter, I will first give a brief description of the aspect markers.

Generally speaking, there are six grammatical morphemes which are treated as aspect markers in Chinese, as shown in (6):

- (6) a. *le*₁ (Perfective aspect marker)
 b. *le*₂ (Inchoative aspect marker)
 c. *guo* (Experiential aspect marker)
 d. *zai* }
 e. *zhe* } (Durative/Progressive aspect marker)
 f. *ne* }

i) The particles 'le₁' and 'le₂'

'le₁' is generally regarded by Chinese linguists (e.g., Zhang, 1957; Chao' 1968; Henne, et al., 1977) as the perfective aspect marker, indicating the 'completion' of an action, as exemplified in (7).

- (7) a. Ta xue le₁ liang-nian zhongwen
 he study le₁ two-year Chinese
 'He studied/has studied Chinese for two years.'
- b. Ta mai le₁ yi-ben shu
 he buy le₁ one-cl. book
 'He bought/has bought a book.'

The upshot of the sentences in (7) is that there is an explicit result derived from the action. For example, the outcome of (7a) is that 'He has two years' learning experience', and that of (7b) is that 'He has the book (now)'.

The sentence-final particle le₂, on the other hand, is treated by Chinese linguists (e.g., Chan, 1980; Teng, 1975; Melchert, 1980) as the 'inchoative' aspect marker, whose function is to mark the 'entry into a state'.

Henne et al. (1977:118) listed the following two functions of the sentence-final particle le₂.

A) It indicates a new situation. For example:

- (8) a. Xia yü le₂
 fall rain le₂
 'It is raining now.'
- b. Ta lai le₂
 he come le₂
 'He is coming.'

B) It indicates that an event happened in the past. For example:

- (9) Ta zaoshang gaosu wo le₂
 he morning tell me le₂
 'He told me this morning.'

ii) The particle 'guo'

The marker 'guo' is regarded by linguists (e.g., Zhang, 1957; Chao; 1968; Henne, et al., 1977; Melchert, 1980) as the 'experiential' aspect marker, indicating that the action expressed by the verb has been experienced some time in the past. Hence, it highlights the facet of 'experience' (of the speaker) instead of the temporal reference (cf. Zhang, 1957). For example, the import in (10) is that 'He translated science-fiction in the past, and thus he has this experience'.

- (10) Ta fanyi guo yi-ben kexue-xiaoshuo
 he translate guo one-cl. science-fiction
 'He has translated a work of science-fiction.'

iii) The particles 'zai', 'zhe' and 'ne'

These three morphemes have generally been regarded by some Chinese linguists (e.g., Chan, 1980; Henne, et al., 1977) as 'durative/progressive' aspect markers.

First, the marker 'zai' is characterized as referring to an action in progress. According to Kwan-terry (1979), whenever 'zai' is used, a specific time is either explicitly or implicitly indicated. In most cases, the time can be said to be the time of utterance. This can be exemplified by the following:

- (11) a. Ta zai tan-qin
 she zai play-piano
 'She is playing the piano (now).'
- b. Ta zai chi-fan
 he zai eat-rice
 'He is eating.'

Next, the marker 'zhe' is concerned with the duration, rather than with the temporal location, of the action or state, as illustrated in (12):

- (12) a. Ta zai wo qian-mian zuo zhe
 he in I front sit zhe
 'He is sitting in front of me.'
- b. Ta na zhe yi-ben za-zhi
 he hold zhe one-cl. magazine
 'He is holding a magazine.'

Finally, the sentence-final marker 'ne' is also characterized as referring to an action in progress. Henne, et al. (1977) point out that a sentence with the sentence-final particle 'ne' reinforces the idea of an action that continues or is progressive, as shown in (13):

- (13) a. Ta shui zhe jiao ne
 he sleep zhe slumber ne
 'He is sleeping.'
- b. Ta ting zhe lu-yin ne
 he listen zhe recording ne
 'He is listening to the recording.'

2.3.1 The Interplay of Aspectual and Temporal Reference

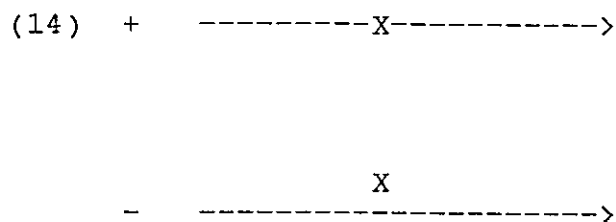
In this chapter I will take another tack in investigating the relation of time and verbal aspect in Chinese. I will propose a 'localistic' analysis of the aspect markers. By 'localistic' I refer to the assumption that "spatial expressions are more basic, grammatically and semantically, than various kinds of non-spatial expressions".[5]

Essentially, the discussion will revolve around two issues: a) how the notion 'temporal reference' should be interpreted in Chinese, and b) the role played by the aspect markers in relation to the temporal specifications. These two issues are, in fact, intimately linked with each other. Accordingly, the aspect markers can be said to actually play a dual role - aspectual and temporal - in the specification of temporal reference in Chinese.

Recall that in Chapter 1 the notion of 'aspect' is taken to be defined as referring to the way a speaker chooses to present a situation in relation to time, and hence aspect-

tual values can be characterized as the temporal relations quantitatively defining events in relation to the time axis. The notion of 'tense', on the other hand, is defined as the temporal location of the situations in time, and thus tense values can be characterized as temporal relations defining the order of events along the time axis. Events can be conceived of as being associated with the time axis, or as being outside the time axis.

This distinction can be represented graphically as follows:[6]



When we say that events are associated with the time axis, this means that they are attached to a more or less *concretely defined* temporal situation; however, this does not suggest that events conceived of as being outside the time axis cannot be temporally ordered.

If events are viewed from this angle, two questions immediately arise: 1) If events are presented as being associated with the time axis, what will be the surface realization in Chinese? 2) How is the contact of time-related events with the time axis to be conceptualized?

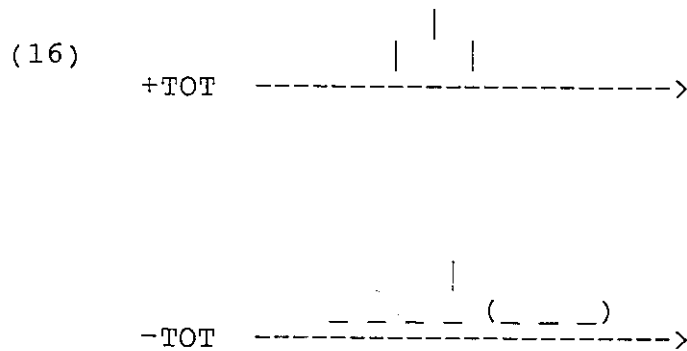
The first question, in effect, concerns the issue of how the 'temporal reference' is to be expressed in Chinese. In this connection the aspect markers in Chinese play an important role. Thus, we can say that, in Chinese, when events are presented as associated with the time axis, the surface realization will consist in sentences being attached with the aspect markers, denoting perfective or imperfective aspect. When events are conceived of as being outside the time axis, the surface realization will consist in sentences without aspect markers. If we interpret events as being associated

with the time axis or as being outside the time axis, we can provide an adequate interpretation of sentences in Chinese with aspect markers and those lacking the aspect markers.[7] As an illustration, consider the sentences in (15):

- (15) a. Ta he jiu
 he drink wine
 'He drink (wine).'
- b. Ta he le₁ jiu
 he drink le₁ wine
 'He drank (wine).'

The difference between (15a) and (15b) consists in the fact that the latter is attached to a concretely defined temporal situation, which is indicated by the aspect marker *le₁*, whereas the former is viewed as being outside the time axis. Seen in this perspective, (15b) refers to a 'concrete' event in the sense that it has been 'actualized'; (15a), on the other hand, refers to an event that is not 'actualized', namely, a general fact. Nevertheless, this does not mean that (15a) cannot be temporally ordered. Indeed, it can still be temporally ordered, and this is the reason why most linguists have invoked the notion of 'context' to explain its temporal relation.

The second question posed above concerns how the contact of time-related events with the time axis is to be conceptualized. Events can be conceived of as totally or partially associated with the time axis. The partial contact with the time axis can be viewed as referring to "a confined glimpse into the process of an event" (Thelin, 1978:31). The total and partial contact of an event with the time axis can be illustrated as follows:[8]



Events characterized by the feature [-TOT] are always realized in the surface structure by imperfective aspect forms. And events characterized by the feature [+TOT] are realized by perfective aspect forms. This 'localistic' approach can account for the general meaning and function of the aspect markers in Chinese. Notice that events characterized by the feature [+TOT] are, for the most part, realized by sentences containing an aspect marker such as 'le₁' or 'le₂' or 'guo', whereas events characterized by the feature [-TOT] are realized by sentences containing an aspect marker such as 'zai' or 'zhe' or 'ne'. Viewed in this way, the aspect markers in Chinese function as event modifiers, indicating the distribution of an event or state of affairs in time. In light of this fact, the aspect markers play a pivotal role in defining the temporal reference in a sentence.

Recall that in Section 2.2. I discussed briefly the temporal specifications in Chinese in terms of the three points within Reichenbach's system and suggested that in Chinese the ordering relation R/S is optional, whereas the ordering relation E/R is obligatory. The problem concerning the ordering relation E/R consists in how the point R is to be determined in a particular sentence, since it is not anchored in a sentence. In this regard, the aspect markers in Chinese play a major role in establishing the anchoring of the reference point. For example, Rohsenow (1977) claimed that one function of the suffix *le*₁ is to define the ordering relation E/R, and further added that the ordering relation E/R characterized by *le*₁ is one of relative 'anteriority'. The Chi-

nese aspect markers in this connection function as what Jakobson (1957) calls 'connectors'.

In order to understand this term properly, I will first give a brief description of Jakobson's approach. In the Jakobsonian scheme, there are four items to be distinguished:

- a) a narrated event (E^n),
- b) a speech event (E^S),
- c) a participant of the narrated event, and
- d) a participant of the speech event, whether addresser or addressee.

Any verb is concerned with a narrated event. Verbal categories may be subdivided into those which do and those which do not involve the participants of the event. Categories involving the participants may characterize either the participants themselves (P^n) or their relation to the narrated events (P^nE^n). Categories abstracting from the participants characterize either the narrated event itself (E^n) or its relation to another narrated event (E^nE^n). Jakobson further distinguishes two categories: designators and connectors. The former refer to categories which "characterize only one narrated item, either the event (E^n) itself or its participants (P^n) themselves", whereas the latter refer to categories which "characterize a narrated item (E^n or P^n) with respect to another narrated item (E^nE^n or P^nE^n)" (1957:134).[9] In Jakobson (1957:134-35), 'aspect' (E^n) is taken to be defined as characterizing "the narrated event itself without involving its participants and without reference to the speech event"; 'taxis' (or 'relative tense') (E^nE^n), on the other hand, characterizes "the narrated event in relation to another narrated event without reference to the speech event".

In a sense, what Jakobson (1957) calls 'taxis' is analogous to the ordering relation E/R in Reichenbach's system. But, what concerns us here is how the linking of one narrated item (E^1) with another narrated item (E^2) is to be achieved. What Jakobson has characterized as 'connectors' and 'taxis' does not differ in meaning except that they are placed into different domains of description and of application. 'Taxis' belongs to the pure characterization of the relation between two narrated events, whereas 'connectors' relate to the characterization of the linking of the two events, and herein lies the theoretical difference between them. At this point, the question arises: How should we analyze the aspect markers in Chinese in light of the two notions suggested in Jakobson (1957)? Should the aspect markers in Chinese be interpreted as markers of 'taxis' or as 'connectors'? Basically, we assume that the temporal ordering in Chinese is E/R, or taxis, i.e., E^1E^2 in Jakobson's terminology. But, the general meaning and the main function of the aspect markers in Chinese consist in the characterization of one narrated event (E^1) with respect to another narrated event (E^2), namely, the linking relation between two narrated items. In other words, they should be construed as 'connectors' rather than as markers of 'taxis'. And we find the disentanglement of the theoretical difference between these two categories extremely helpful in accounting for the interplay of aspectual and temporal reference in Chinese. Seen in the light of the ordering relation E/R, the function of the aspect markers can be said to determine the establishment of the anchoring of the reference point R in a sentence. This characterization of the aspect markers tallies with the 'localistic' analysis of events suggested in this chapter.

To sum up, I have so far tackled two essential issues bearing on the system of temporal reference in Chinese and have argued that the aspect markers play a dual role in defining the temporal specification of a sentence. The temporal function of the aspect markers will be discussed in the next section.

2.4 The Main Function of the Aspect Markers in Chinese

2.4.1 The Markers *le*₁ and *le*₂

As we mentioned briefly in the previous section, the aspect marker *le*₁ has been taken by most Chinese linguists (e.g., Chao 1968; Henne et al. 1977; Zhang 1957; Chan 1980; among others) as the 'perfective' aspect marker, denoting a 'completed' action or the 'completion' of an action. The claim that *le*₁ refers to the 'completion' of an action or a 'completed' action is misleading in that the perfective aspect cannot be explained by the notion of 'completed' action or 'completion' of an action. 'Completion' is not the criterion of the perfective aspect. Rather, the 'completion' of an action refers to the inherent temporal nature (i.e., aktionsart) of a sentence. As we shall see in Chapters 3 and 6 respectively, Chinese resorts to 'lexical' means in the explication of temporal boundedness of events. To give a concrete example, consider (17):

- (17) a. Ta xie *le*₁ yi-feng xin
 he write *le*₁ one-cl. letter
 'He wrote a letter.'
- b. Ta xie-wan *le*₁ yi-feng xin
 he write-finish *le*₁ one-cl. letter
 'He finished (writing) a letter.'

The (a) and (b) sentences in (17) all involve the aspect marker *le*₁. Yet, they differ in semantic interpretation. (17b) refers to the 'completion' of an event, whereas (17a), in the strict sense, does not refer to the 'completion' of an event, in that the event involved can still be negated in the sense that the endpoint of the event has not been reached, as shown in (18):

- (18) Ta xie *le*₁ yi-feng xin, keshi meiyou
 he write *le*₁ one-cl. letter but NEG
 xie-wan
 write-finish
 'He worked on a letter, but he did not finish it.'

Essentially, the aspect marker *le₁* denotes 'succession' of events. That is, it refers to a 'localized' event - one locating at some particular point in time that cannot coincide with the moment of speech, and must find a location somewhere else on the time axis. Thus, crucial to *le₁* is its location between other events, which determine its position in the succession, even if this be only implied. Consider (19):

- (19) a. Ta he le₁ liang-ping jiu
 he drink le₁ two-cl. wine
 'He drank/has drunk two bottles of wine.'
- b. Ta mai le₁ yi-ben xiaoshuo
 he buy le₁ one-cl. novel
 'He bought/has bought a novel.'

The location of the event referred to by *le₁* is defined somewhere along the time axis; however, the foregoing and the ensuing point of the event are not explicitly specified, but only implied. Hence, the successive event of (19a) may be 'the reason why he is so drunk now', and that of (19b) may be 'he is reading it now'.

Both Rohsenow (1977) and Melchert (1980) have asserted that *le₁* refers to 'anteriority', i.e., that one event is prior to another. But, the notion of 'anteriority' refers only to one facet of that of 'succession', and thus cannot cover the general meaning of the marker *le₁*. For example, the notion of 'anteriority' itself cannot fully account for the sentences in (19) for the reason that the other event is only implied but not explicitly specified.

The morpheme *le₁*, on the other hand, if interpreted as denoting the 'succession' of events, will provide us a more adequate description of the function of this marker than the analyses found in the literature that treat it as referring to a "bounded event viewed in its entirety" (Li & Thompson 1981a:185) or as referring to a 'completed' action (Chao, 1968; Henne et al., 1977). For example, *le₁* in the sentences of (20) cannot be explained in terms of these two analyses:

- (20) a. Wo mingtian chi le₁ fan cai qu
 I tomorrow eat le₁ rice then go
 kan dianying
 see movie

'Tomorrow I'll go to the movie after I have supper.'

- b. Ta xia le₁ ke jiu dao tushuguan
 she after le₁ class then go library
 qu kan-shu
 go see-book

'She goes to the library immediately after class.'

- c. zuotian ta xie le₁ yi-feng xin
 yesterday she write le₁ one-cl. letter
 cai kaishi zuo gongke
 then begin do homework

'Yesterday she started to do her homework after she (had) finished a letter.'

The sentences in (20) indicate neither a 'completed' event nor a 'bounded' event viewed in its entirety. Rather, they refer to a 'succession' of events. The function of the aspect marker *le₁* in the sentences of (20) is to locate the event on the time axis. For example, in (20b), the aspect marker *le₁* in the first clause - 'ta xia le₁ ke' ('after class') - indicates the location of the event on the time axis. And the second clause - 'dao tushu-guan qu kan-shu' ('go to the library') - refers to the successive event. This explanation is fully in line with the interpretation of the ordering relation E/R, as discussed. That is, the problem concerning the ordering relation E/R consists in determining how the reference point R is to be established in a sentence. Taken in the way, the aspect marker *le₁* serves to establish the reference point R in a sentence.

The temporal and conditional sentences in Chinese, as shown in (21), also present problems to the analyses that treat the aspect marker *le₁* as referring to a 'completed' event (or action) or as referring to a 'bounded' event viewed in its entirety.

- (21) a. Ni si le₁, wo qu dang heshang
 you die le₁ I go become monk
 'When/if you die, I shall become a monk.'
- b. Ta kai le₁ men, ni cai jinqu
 he open le₁ door you then enter
 'When/If he opens the door, then you enter.'

In Chinese, sometimes it is hard to disentangle conditional from temporal clauses because there is a strong temporal connotation in a conditional clause: that is, the fulfillment of the clause expressing the consequence (i.e. apodosis) hinges upon the emergence of the event in the clause expressing the condition (i.e. protasis). The first clause of the (a) and (b) sentences in (21) refers to the condition. In addition, the aspect marker *le*₁ indicates the location of the event on the time axis. The second clause of the (a) and (b) sentences in (21) refers to the 'successive' event (i.e., the consequence). An essential thing to note about the sentences in (21) is that the order between the first clause and the second clause cannot be reversed, in that the former serves as the anchoring point, namely, the reference point R, in the sentence.

We proceed next to the discussion of the sentence-final particle *le*₂. [10] There have been various analyses of the sentence-final particle *le*₂, which can be grouped under two different views: that is, *le*₂ is treated either as a marker of tense or as a marker of aspect. Zhang (1957), for example, interpreted *le*₂ as a marker of 'definite' (or 'perfect') tense, indicating the anteriority of the action to the reference time. A large number of linguists (e.g., Teng 1973; Chan 1980; Melchert 1980) treat *le*₂ as a marker of 'inchoative' aspect, indicating 'entry into a state'.

Li & Thompson (1981b) have further provided a pragmatic interpretation of *le*₂ with regard to its discourse function. They take *le*₂ as a marker of 'perfect' aspect (within Friedrich's (1974) system), which inheres in the concept of 'stativity'. They further claim that 'perfect' is more than simple 'stativity' and that "the essence of the 'per-

fect' is its function of relating events/states to a reference time, either to the time of the narrative or to the time of the speech act" (Li & Thompson 1981b:19). And the sentence-final particle *le*₂ in Chinese functions to "inject background comments which are relevant to the situation existing at a given point in the narrations" (op.cit.:20).

The different analyses presented above, at first sight, seem to contradict one another. However, a closer examination shows that they do not differ considerably from one another. And the difference between them lies only in the confusion of the terminology adopted in each analysis. What is the difference between the '(relative) definite' (or 'perfect') tense and the 'perfect' aspect, or that between the 'perfect' aspect and the 'inchoative' aspect? It has never been clearly explicated by these linguists. As I see it, the common core of these analyses seems to be the implication of a 'resultative' force in a sentence in relation to the moment of speech. By way of illustration, consider the following sentences:

- (22) a. Wo kan *le*₁ nei-ben xiao-shuo *le*₂
 I see *le*₁ that-cl. novel *le*₂
 'I have read that novel.'
- b. Wo chi *le*₁ san-wan fan *le*₂
 I eat *le*₁ three-cl. rice *le*₂
 'I have eaten three bowls of rice.'
- c. Dao mingnian xiatian ta jiu xue *le*₁
 until next-year summer she then study *le*₁
 liangnian yingwen *le*₂
 two-year English *le*₂
 'She will have studied English for two
 years by next summer.'

Melchert (1980) claimed that *le*₂ implies an (unspecified) starting point for the condition expressed by the predicate but no end point. In addition, the combination of *le*₁ (being interpreted as the sign of 'anteriority') and *le*₂ in a sentence, as shown in (22), corresponds roughly to one of the uses of English present perfect ('present relevance'). This analysis of the combination of *le*₁ and *le*₂ given by Melchert is basically correct.

Nevertheless, his equation of the combination of *le*₁ and *le*₂ to the 'present relevance' of the English present perfect is not entirely accurate because 'present relevance' covers only part of the cases, as shown in (22a) and (22b). (22c), on the other hand, does not refer to present relevance but to the future. Yet, the question brought up by Melchert, namely, the compositional nature - the co-occurrence - of the aspect markers in Chinese to indicate the temporal reference in a sentence has been neglected by Chinese linguists.

In this chapter I will treat *le*₂ as an aspect marker of the 'perfect' (being preferred over the 'inchoative'). The basic meaning of the perfect is 'temporal indeterminacy' in the sense that it is "temporally neutral except for its abiding implication of some past action".[11] The essential properties of the 'perfect' can be characterized as follows: the absence of the precise localization of the event and the fact that it is context-free. By 'context' is here referred to the temporal sequence in which every event is embedded. The perfect is resorted to only in the occasion where it calls for a temporal reference that is able to establish the relevance of the past event to the moment of speech. Interpreted in this light, the sentence-final particle *le*₂ actually denotes the event's temporal location prior to the moment of utterance. Hence, what the sentence-final particle *le*₂ has achieved can be characterized as lifting a past event out of its temporal context. As a consequence, there exists a strong tendency toward the 'resultative' nuance implied by the perfect, namely, the event has a result. This fact explains why the notion of 'present relevance' is often invoked by linguists to explain the 'perfect'. [12] For example, Melchert (1980), as mentioned, considered the combination of *le*₁ and *le*₂ in Chinese to refer to the 'present relevance'. But the notion of 'resultativity' should not be used as the criterion of the perfect, and the notion of 'present relevance', on the other hand, covers only part of the cases. Instead, the notion of 'subsequent relevance' should replace it. The sentences in (22) in this connection can serve

as an illustration. Admittedly, there is a strong resultative force implied in the sentences of (22). What comes to the fore in (22a) and (22b) respectively is that it matters at present that 'I have read that novel and thus I know its content', and that 'I have eaten three bowls of rice and so I am full'. And in both (22a) and (22b) the reference point is in the present, and thus the event can be assumed to be of present relevance. This is not the case with (22c) where the reference point is not in the present, and the 'resultative' implication - the result of her having studied English for two years - can only be claimed to be of 'subsequent relevance'. In this case, the 'future perfect' will be used in English.

In brief, the sentence-final particle *le*₂ is used to denote a situation which has become 'objectivized'.

2.4.2 The 'Experiential' Marker 'guo'

Different treatments of the marker *guo* are found in the linguistic literature. For the most part, it has been interpreted by Chinese linguists as the 'experiential' aspect marker, referring to "an event viewed as having been experienced at least once" (Li & Thompson 1981a :236).

Chao (1968:25) treats *guo* as the marker of indefinite past, meaning "happened at least once in the past". Comrie (1976:58-59), following Chao (1968), takes *guo* as the marker of 'experiential perfect', indicating that "a given situation has held at least once during some time in the past leading up to the present".

Melchert (1980) on the other hand treats *guo* as a marker of aktionsart, indicating that the subject has performed an action at least once.

The analysis of *guo* as the marker of 'experiential' aspect, as presented by these linguists, it seems to me, is somewhat misleading. In fact, the essential property of *guo* has never been touched. Dahl (1985) has remarked that the Chinese *guo*-construction represents a distinct subvariety of 'experiential' aspect, if not a distinct category altogether. According to Dahl (1985:141), the basic use of the 'experiential' aspect is "in sentences in which it is asserted (questioned, denied) that an event of a certain type took place at least once during a certain period up to a certain point in time". The use of the marker *guo* in Chinese does not conform exactly with the contexts of the 'experiential' aspect. For example, the sentences in (23)

- (23) a. Wo kan guo zhe-ben shu
 I see guo this-cl. book
 'I read/have read this book.'
- b. Ta jie guo san-nian hun
 he tie guo three-year marriage
 'He was married for three years (but he is not married now./He has had an experience of being married for three years.'

cannot be fully accounted for in terms of the notion of 'experiential' aspect, in that the feature 'experiential' referred to in the sentences, if any, is only implied, but it is not the essential property denoted by the marker *guo*.

The main function of the marker *guo* is to *localize* an event somewhere along the past stretch of the time axis between an antecedent and a subsequent point: the event before and the event after in a sequence. This specific characteristic can be viewed as a *sandwiched* character. And the limits of the three stages (of the events) are conceived of by 'change' only and not by indication of time. Accordingly, there is no 'change' during the event set forth in the *guo*-construction, but only before and after. In fact, the duration of the event is usually ignored. The point of orientation, on the other hand, is the present, which can be illustrated by the sentences in (23): (23a)

shows that 'I have read this book (and so I can tell something about it now)' and (23b) points out that 'He has had an experience of being married for three years'; therefore, both (23a) and (23b) are rendered in English by the 'present perfect'. However, the immediately past or recent quality, though a very common feature, by no means constitutes an indispensable condition for the use of the aspect marker *guo*; the one indispensable quality of using the marker *guo*, in effect, is the *localization* of the event in the past time. As a consequence, the *guo*-construction often indicates the *authentic* or *witnessed* feature - the witnessed event viewed as having taken place before the moment of utterance - which arises as a result of implication.[13] What the examples in (23) have shown is this kind of 'witnessed' feature and this is the reason why linguists (e.g., Chao, 1968; Comrie, 1976) have often invoked the notion of 'experience' to explain the use of the marker *guo*. [14]

We turn next to the contrast of the function between the marker *guo* and the marker *le*₁. The use of these two markers shares a certain similarity and yet their difference has never been fully accounted for by linguists. As mentioned earlier, *le*₁ is generally viewed by most linguists as the perfective aspect marker, referring to a 'completed' action, whereas *guo* is treated as the 'experiential' aspect marker, denoting an action viewed as having happened or having been experienced at least once. The temporal difference between *guo* and *le*₁, as illustrated by the examples in (24) and (25), however, cannot be accounted for in the light of the above interpretation of these two markers.

- (24) a. Ta jie le₁ san-nian hun
 he tie le₁ three-year marriage
 'He has been married for three years (i.e.,
 he is still married).'
- b. Ta jie guo san-nian hun
 he tie guo three-year marriage
 'He was married for three years (but he
 is not married now).'
- (25) a. Zhe-ben xiaoshuo wo zhi kan le₁ yiban
 this-cl. novel I only see le₁ half
 'I have finished (reading) only half of
 this novel (but I still continue to read
 it).'
- b. Zhe-ben xiaoshuo wo zhi kan guo yiban
 this-cl. novel I only see guo half
 'I finished only half of this novel (but I am
 not reading it now).'

Note that the events in the (a) and (b) sentence of (24) and (25) can all be interpreted as 'completed' action. In view of this fact, it seems that the distinction between *le₁* and *guo* can only be explained by resort to other criteria. As noted above, the main function of *le₁* is to denote 'succession' of events, whereas the main function of *guo* is to specify an event somewhere along the past stretch of the time axis between an 'antecedent' and a 'subsequent' point. In consequence of their distinct functions, the *le₁*-construction and the *guo*-construction display different implications. For example, the implication of (24a) is that 'he has been married for three years, and now he is still married'. In a word, what *le₁* has characterized is a succession of events - an event that moves up to a point in time, reaches it and surpasses it - and thus it denotes a 'resultative' implication. The same holds true for (25a). On the other hand, what the marker *guo* has characterized is a 'localized' event in past time, but with an indication of the 'witnessed' character. Thus, the overtone of (24b) is that 'he was married for three years, but he is not married now'. The same applies to (25b).

In short, the characteristic feature of the *guo*-construction can be characterized as the *summary* function and that of the *le₁*-construction, as the *resultative* function.

A similar aspectual distinction has been noted in Russian between the 'general factual' use of the Slavic Imperfective and the Perfective. For example, Comrie (1976:113) gives the following contrast: In Russian the question

- (26) *vy citali 'vojnu i mir'?*
 'Have you read 'War and Peace'?

and similarly the answer

- (27) *cital 'Yes, I have'*

both with the Imperfective, simply enquire about and register the fact the the person in question has indeed read the book mentioned, whereas the Perfective

- (28) *vy procitali 'vojnu i mir'?*

is more specific, asking whether the addressee has finished 'War and Peace'.

2.4.3 The Functions of 'Zai', 'Zhe', and 'Ne'

Different analyses have been found in the linguistic literature with regard to the markers *zai*, *zhe* and *ne*. For the most part, the markers *zai* and *zhe* are either treated as 'durative' aspect markers (e.g., Chan 1980; Li & Thompson 1981a; Zhang 1957), with *zai* referring to an "ongoing activity", while *zhe* denotes "ongoing state resulting from an activity" (Li & Thompson 1981b:218), or as 'progressive' markers (Teng 1975), with *zai* defining the actual progression of events, while *zhe* characterizes continuous states. The sentence-final particle *ne*, on the other hand, has been treated either as a marker of 'relative progressive tense' (Zhang 1957) or as a 'durative' aspect marker (Chan 1980).

However, by treating the morphemes *zai*, *zhe* and *ne* as 'durative' aspect markers, as many Chinese linguists have, one will encounter difficulty. For one thing, the notion of 'durativity' should be associated with 'aktionsart' rather than with 'aspect'. The function of the morphemes *zai* and *ne*, it seems to me, has nothing to do with 'durative'

aspect, and only *zhe* refers to 'durativity'. One of the problems with the analysis by which these morphemes are treated as 'durative' aspect markers consists in the fact that it cannot provide an adequate account of the *raison d'être* of the co-occurrence of these morphemes within a sentence, as the following sentences in (29) demonstrate:

- (29) a. Ta zai chuan zhe yifu ne
 she zai put on zhe clothes ne
 'She is putting on her clothes.'
- b. Women zai chi zhe fan ne
 we zai eat zhe rice ne
 'We are (just) eating our supper.'

The morphemes *zai* and *ne* do not refer to 'durativity'; rather, they have a connotation of 'locality'. Thus, (29a) and (29b), to some extent, denote the *location* of activities.

Of the analyses given so far on the morphemes *zai*, *zhe* and *ne*, Melchert (1980) has provided the most convincing characterization. In his system, *zai* is interpreted as a marker of 'taxis' in Chinese, denoting '*simultaneity*'; *zhe*, on the other hand, is a marker of aktionsart, namely, a marker of 'duration'. Finally, the sentence-final particle *ne* is viewed as a marker of aspect, whose function is to indicate *identity*. Basically, I agree with Melchert's claim that the morpheme *zhe* should be viewed as the marker of aktionsart in order to provide a more adequate elucidation of the various combinations of these markers.[15] However, Melchert (1980) still falls short of providing a satisfactory explanation of the morphemes *zai* and *ne*. An essential thing to notice about these two aspect markers is that they have a strong connotation of 'locality'.

The use of locative constructions in the expression of the Imperfective aspect, especially progressive aspect, has been noted in many languages. According to Comrie (1976:98), "the most widespread parallel is between progressive aspect and expressions referring to the place where something is located". The basic characteristic of this

form of expressions is that, in order to say 'he is working', a paraphrase of the type 'he is in/at work' is used.[16]

The locative connotation displayed by the aspect marker *zai* derives from its verbal counterpart, which means 'at, in, on', as can be seen from the examples in (30):

- (30) a. Ta zai xue-xiao
 he at school
 'He is at school.'
- b. Ta zuo-zai zhuozi-shang
 he sit-on table-top
 'He is sitting on the table.'

Thus, *zai* as an aspect marker still retains its spatial source, indicating 'in the process of', as the sentences in (31) show:

- (31) a. Ta zai chang-ge
 she zai sing-song
 'She is (in the process of) singing.'
- b. Ta zai kan-bao
 he zai read-newspaper
 'He is (in the process of) reading the newspaper.'

The sentence-final particle *ne* also displays a strong connotation of 'locality'. According to Xiao-Fu (1957), the particle *ne*, etymologically, may originate from the locative phrase *zai nali* ('in that place/location'), which has a special use - being placed after the verb at the final position of a sentence - as illustrated in (32):

- (32) Na liang-shan men, yi-shan guang-zhe, yi-shan
 that two-cl. door one-cl. close-zhe one-cl.
 ban yan zai-nali (Pai An Jing Qi, 3)
 half slightly open zainali
 'Of the two doors, one is closed, the other
 is ajar.'

Another thing to note is that, in some dialects, the particles *ne* and *li* (an abbreviated form of 'zai nali') are interchangeable. This piece of evidence argues strongly for the claim that *ne* displays a locative connotation in its temporal function, as shown in the examples of (29).

First, let us deal with the morphemes *zai* and *zhe*. Melchert (1980) claims that since an ongoing (simultaneous) action is usually seen as taking a certain amount of time, *zhe* thus often co-occurs with *zai*. Consider the following examples:

- (33) a. Ta bi-zhe yanjing
 he close-zhe eye
 'He has his eyes closed./He closes his eyes.'
- b. Ta mei(you) bi-zhe yanjing
 'He does not have his eyes closed.'
- (34) Da-men suo zhe [negative 'mei(you)]
 big-door lock zhe
 'The door is locked.'
- (35) Ta chuan-zhe xie-zi [negative 'mei(you)]
 he wear -zhe shoe
 'He is wearing shoes.'
- (36) a. Ta zai chuan zhe xiezi
 he zai wear zhe shoe
 'He is putting on shoes./He is engaged
 in putting on shoes.'
- b. Ta bu-zai chuan (-zhe) xiezi
 he NEG-zai wear zhe shoe
 'He is not putting on shoes.'

Notice that the negative counterparts of (33) - (35) draw on the negative marker *mei(you)*. In order to account for the 'anteriority' of the action (to the present) as implied in these sentences, Melchert (1980) posits the presence of *you-le1* in their underlying structure.[17] Therefore, the actions of closing his eyes, locking the door, and putting on shoes are all anterior (to the present). According to Melchert, (33a) means 'He closed his eyes and kept them closed'; (34a) means 'Someone locked the door and it is still locked', and (35) means 'He put on shoes and has them on'. And the difference between (35) and (36) is that while the former combines 'anteriority' and 'duration', the latter combines 'simultaneity' and 'duration'.

So far as I can see, Melchert's postulating of the occurrence of *you-le1* in the underlying structure of the *zhe*-sentence is quite problematic. Notice that *zhe* is an

aktionsart marker of 'duration'. However, the inception and termination (of the situation) are not brought into the scene. Viewed in this way, a 'durative' situation requires as a necessary condition an inceptive stage. It does not necessarily follow that *zhe* refers to, and for that matter, combines with 'anteriority' - the *you-le1* alternation as suggested by Melchert (see footnote 7). The rationale in Melchert (1980) for positing the presence of the *you-le1* alternation in the underlying structure of the *zhe*-sentence is provided mainly to account for the negative counterpart of the *zhe*-sentence, which involves the negative morpheme '*mei(you)*'.

A word should be said about negation in Chinese at this point. Chinese resorts to two lexical morphemes - '*bu*' and '*mei(you)*' - in the expression of negation. The main function of '*bu*' is, for the most part, not to negate (the performance of) the action as such, but the potential plausibility of the result to be achieved by the action. Hence, '*bu*' has both temporal and modal import. Because of this dual function, negation involving the morpheme *bu* always refers to 'posteriority'. In contrast, the major function of '*mei(you)*' is to negate (the performance of) the action as such. That is, the action (and the result implied) is barred from being actualized. By implication, '*mei(you)*' often denotes 'anteriority'.

As has just been mentioned, *zhe* refers to a situation of which the inceptive and the terminative stages are not indicated. Thus, it is quite natural that the negative counterpart of the *zhe*-sentence, as shown in (33) - (35), involves the negative morpheme *mei(you)*.

On the other hand, Melchert fails to explain why (36), which involves the combination of *zai-zhe*, is negated by the morpheme *bu*, but not by the morpheme *mei(you)*. As we noted earlier, the aspect marker *zai* has a strong connotation of 'locality', indicating 'in the process of'. Hence, in addition to denoting 'simultaneity' of two process-

es, *zai* mainly denotes the location of activities. In light of this fact, the *zai*-construction in Chinese is not compatible with states. That is, it cannot denote a temporary state nor temporariness of activities. Given this 'locative' connotation, we can explain why sentence (36a) resorts to the morpheme *bu* for negation. That is, the negative morpheme is used to negate the 'process' as such, rather than the action involved in it.

There is another aspect of the use of the aktionsart marker *zhe* which, in my view, has never been fully accounted for by Chinese linguists. First, consider the following sentences:

- (37) a. Ta xiao-zhe shuo
 he smile-zhe speak
 'He spoke smilingly./Smilingly, he spoke.'
- b. Ta zou-zhe lu kan bao
 he walk-zhe road see newspaper
 'He reads the newspaper, while (he is)
 walking.'
- c. Ta pao-zhe lai
 he run-zhe come
 'He came running.'

The morpheme *zhe* in the sentences of (37) is generally described as being used to "mark a subordinate verb in a verb-plus-verb series" (Kwan- Terry 1979:226) or to mark the simultaneity of an action with respect to a central one. Chu (1983:92) treated *zhe* as the concomitative aspect marker in the sense that it is used to "refer to an action or event existing or occurring concurrently with or accompanying what is denoted by the main verb in the sentence". In other words, the verb suffixed with *zhe* denotes an action or event happening at the same time as, but subordinated to, what the main verb represents. This kind of explanation for the use of the morpheme *zhe* in (37), it seems to me, has only touched the surface phenomenon of this type of construction.

In this regard, S-F Huang (1975) has presented a very interesting account of the semantics of manner adverbs. To begin with, he distinguishes three classes of action-characterizing adverbs - the manner adverbs, the state-of-mind adverbs, and the resultative adverbs. As noted by Huang, of these three classes of action-characterizing adverbs, the adverbs which characterize the ways in which actions are carried out - the manner adverbs - are clearly much more intimately connected with the description of action. In his view, what is expressed by means of a separate manner adverb in English may be achieved in another language by other means, e.g., suffixation to the verb. For example, in Turkish, the gerundial form of the verb is often used to express the concomitant circumstances, which in English would be accomplished by using a manner adverb. In Turkish, the '-e' gerund indicates 'repeated action' contemporaneous with that of the main verb, which is shown in (38):

- (38) Calakalem yazmak
'to write busily (Lit. throwing-pen-write)'

The '-erek' gerund, on the other hand, denotes a single act or continued activity contemporaneous with or slightly prior to the main verb, as shown in (39):[18]

- (39) a. Gulerek cevap verdi
'Laughingly he answered.'
b. Kosarak geldi
'He came running./(Lit. 'Running, he came.')

According to Huang (1975:39), the lack of a construction in English like 'He came runningly' or 'Runningly he came', is presumably due to the fact that 'runningly', unlike state-of-mind adverbs such as 'smilingly' and 'laughingly', only pertains to or characterizes the 'mode' or the 'manner' in which the action of 'coming', as in (39b), is carried out, failing at the same time to tell us about the mental state of the Agent in ways that state-of-mind adverbs do. Therefore, when some attribute of the Agent of the action is to be revealed, it is optional to use either a state-of-mind adverb or simply a participle. For example, 'Laughingly he answered' means just the same as 'He, laughingly,

answered'. The acts of 'answering' and 'laughing' in this case are concurrent. But, when the mode of answering by way of laughing is intended, the sentence 'He answered laughing' must be used.

S-F Huang's (1975) description of the use of the '-erek' gerund in Turkish, as shown in (39), bears on that of the use of the aspect marker *zhe* in the sentences of (37). The function of *zhe* in the examples of (37) parallels precisely that of the '-erek' gerund in Turkish: They both refer to 'continued activity' contemporaneous with or slightly prior to the main verb, and they function as manner adverbs. It should be emphasized here that this kind of manner adverb is also achieved in Chinese by means of suffixation to the verb. Thus, the verbs in the sentences of (37) being suffixed with the morpheme *zhe*, namely, 'smilingly', 'walking', and 'running', should all be construed as manner adverbs. This use of the marker *zhe* offers another piece of evidence in support of the claim that *zhe* should be interpreted as a marker of aktionsart rather than as a marker of aspect.

Finally, we turn to the problems that relate to the function of the sentence-final particle *ne*. In comparison with the other sentence-final particle *le₂*, the issues concerning the particle *ne* are somewhat complicated in that the morpheme *ne* involves both modal and temporal interpretation. In effect, the temporal function is only one of the divergent uses of the particle *ne*. Zhang (1957) treats *ne* as the marker of 'relative' tense, referring to 'progressiveness'. Admittedly, Zhang did not take the modal function of the particle *ne* into account. Rygaloff (1973:114), on the other hand, defines *ne* as the marker of 'non-changement'. Melchert (1980:649) claims that *ne*, as opposed to *le₂* which indicates "entry into a new state", means "continuation of a state". The sentence-final particle *ne* can co-occur with the other two markers, namely, *zai* and *zhe*. Melchert, following Rygaloff, points out that any action which is on-going or seen

as having duration can be said to be continuing, and this explains why the frequent co-occurrence of *ne* with *zai*, and/or *zhe*. The following are Melchert's examples, illustrating the difference in interpretation of sentences with or without the particle *ne*:

(40) Ta hai mei(you) lai (ne)
 he yet NEG come ne
 'He hasn't come yet.'

(41) Wo fuqin hai huo-zhe (ne)
 my father still live-zhe ne
 'My father is still living.'

As we see, both (40) and (41) can occur with or without the particle *ne*. Rygaloff (1973) claims that the addition of *ne* is always redundant. Melchert (1980:649) argues against this assertion and suggests that a sentence like (40) without *ne* includes only one presupposition, namely, the subject is expected to come in the future. The addition of *ne* implies that he was expected to come before now: his (continued state of) non-arrival is contrary to expectation. By the same token, a sentence like (41) without *ne* is a general statement of fact. With *ne* it would be appropriate in a situation where the speaker's father is known to be seriously ill. The speaker is insisting that his father is still alive, against the possible expectation that he is not.[19]

The interpretation of (40) and (41) with the addition of *ne*, as given by Melchert (198), is not without problems. For one thing, the use of *ne* in both sentences can be characterized mainly as a 'modal' rather than 'temporal' interpretation. The presupposition (it would be better termed 'pragmatic implication') brought out in these two sentences, namely, the 'contrariness to expectation', is clearly the result of the adverbial *hai* ('yet, still') and the modal *ne*. Notice that in the sentences in (42) with the occurrence of *ne*, there exists no such implication at all.

- (42) a. Women zheng-zai chi-zhe fan ne
 we just eat-zhe rice ne
 'We are just eating now.'
- b. Ta zai shuijiao ne
 he zai sleep ne
 'He is sleeping.'
- c. Waibian xia-zhe yu ne
 outside fall-zhe rain ne
 'It is raining outside.'

Chao (1968:803), on the other hand, cites another use of *ne*, as shown in (43), which indicates a fact contrary to expectation (in an exaggerated manner).

- (43) a. Ta hai hui che-huang ne
 he even can pull-lies ne
 'He can even tell lies. (I didn't expect him
 to be that clever).'
- b. Ta hai hui zuo shi ne
 he can even write poem ne
 'He can even write poems.'

Melchert (1980:650) suggested that these diverse functions of *ne* (such as 'continuation of a state' and 'fact contrary to expectation') can all be reduced to one basic function and he proposed that the basic function of *ne* is to indicate 'identity'. In the case of 'continuation of a state', it is the identity of the current state with the past one. And the implication that something is contrary to expectation, according to Melchert, is clearly a shade of meaning added to *ne* secondarily due to the fact of its frequent co-occurrence with *hai* ('still, yet'). Here, Melchert (1980) has conflated the modal and the temporal use of the particle *ne* in his interpretation of the above examples.

It should be mentioned here that Melchert's (1980) interpretation of *ne* is based on the analysis of Hittite given by Hart (1971). Hittite, an extinct language of ancient Anatolia, possesses an enclitic particle '*-pat*', whose basic function is to mark 'identity'. [20]

In my opinion, Melchert's (1980) comparing of the sentence-final particle '*ne*' in Chinese with the enclitic '*-pat*' in Hittite is of a questionable nature. For one thing, Hittite is an extinct language, and hence the evidence from Hittite adduced by him cannot be verified. Granted that his analysis is correct, the notion of 'identity', it seems to me, presupposes that of 'location'. That is, an item (or a situation) must first be located, spatially or temporally, in order for it to be 'identified'. As we mentioned above, the particle *ne* has a strong locative connotation, indicating 'in this/that place'. Given this fact, the notion of 'identity' is derived from the locative source. This piece of evidence serves to explain why the particle *ne* can co-occur with the aspect markers *zai* and/or *zhe* in a sentence, as shown in (44):

- (44) a. Wo chi zhe fan ne
 I eat zhe rice ne
 'I am eating now.'
- b. Ta zai chang-ge ne
 she zai sing-song ne
 'She is (in the process of) singing.'

Alleton (1981:95), on the other hand, has brought up one important characteristic concerning the use of sentence-final particles in Chinese: They occur mostly in everyday speech, but are extremely rare in scientific texts. She points out that the absence of final particles (in scientific text) in Chinese typifies the 'historical' text.[21] She has also noted that *le2* is definitely concerned with 'aspect' despite its rare occurrence in scientific texts. *Ne*, on the contrary, has one common function: namely, in using the sentence-final particle *ne*, the speaker is appealing to his listener's active participation. Finally, she characterizes sentences with sentence-final particles and those without sentence-final particles in terms of Benveniste's opposition: 'history' versus 'discourse'. [22]

Alleton (1981:94) has given the following examples in illustration of this opposition.

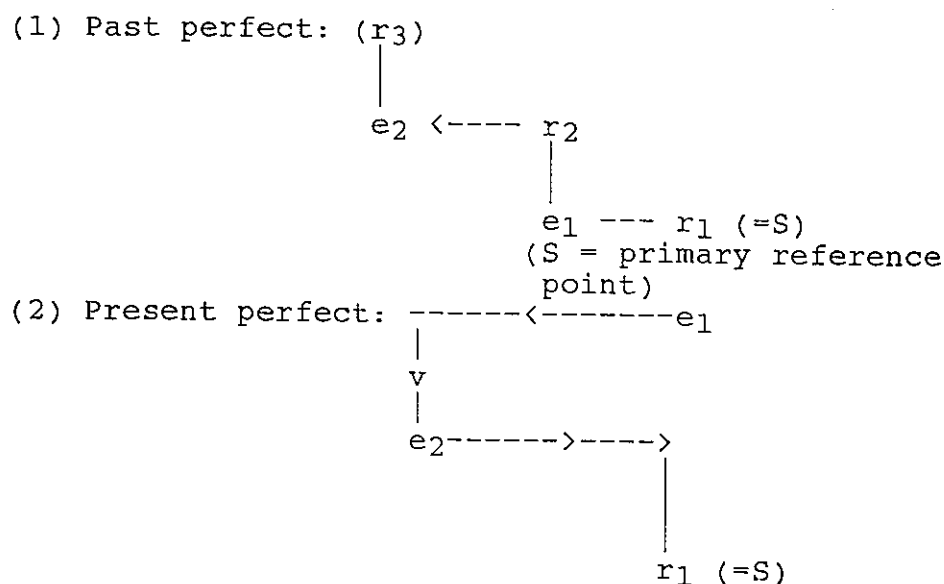
- (45) a. Wo lai de shihou, laotaiye hai deng shaoye.
 I come de time master still son
 'When I came here, the present master was
 still but the son of the house.'
- b. wo lai de shihou, laotaiye hai deng shaoye ne.
 'When I came here, the present master was
 still but the son of the house (no more than
 that - I witnessed it).'

According to her, (45a) gives neutral information, relating facts which do not concern the interlocutors personally: The sphere is that of a relation, of what Benveniste calls 'history' (l'histoire). In (45b) a discourse is taking place: the speaker is trying to persuade the hearer. Thus, (45a) and (45b) have different implication: the former implies that "It has been a long time since I have been to this house", whereas the latter implies that "I know him well, and he does not impress me."

To conclude, in this chapter I have dealt with the system of temporal reference in Chinese, and specifically, the interplay of aspectual and temporal reference in Chinese. Essentially, in this chapter I have adopted a 'localistic' analysis of the aspect markers. On the basis of what has been said above, it seems that the main function of the aspect markers in Chinese is to establish the anchoring point of an event on the time axis. In other words, they function as event modifiers, indicating the distribution of an event (or state of affairs) in time. As such, the aspect markers are closely related to the semantic characterization of a sentence from the standpoint of aktionsarten, which will be the main topic of the chapters that ensue.

Footnotes to Chapter II

- [1] The relation of 'overlapping' is symbolized by a comma separating two time-point symbols. The relation of 'precedence' can be defined as such that the symbolization X-Y is to be interpreted as 'X precedes Y'. According to Comrie (1981:24), 'overlapping' is a symmetrical relation, so that X,Y and Y,X may be treated as equivalent; precedence, on the other hand, is asymmetrical. (For details, see Comrie 1981, 1985.)
- [2] The hierarchical analysis of tense meaning suggested by Thelin (1978) is quite interesting. For example, he has given the hierarchical structure of the past perfect and the present perfect as follows (1978:42):



On the other hand, Vikner (1985) has modified Reichenbach's system and suggested a scheme of three two-place relations represented in a chain. Thus, in this system, there are eight instead of nine tenses. (For more details, see Thelin (1978) and Vikner (1985) respectively.)

- [3] Comrie (1985), for instance, sets up the formal representations of absolute tense in terms of the relation E/S, and those of relative tense in terms of the relation E/R (See Comrie 1985 for details).

- [4] Bull (1960) pointed out that the idea put forward by some linguists that languages can be classified into two categories - 'tense' and 'tenseless' - is based on a wrong and biased assumption. According to him, the so-called 'tenseless' languages do not exist.
- [5] This definition is taken from Lyons (1977:718).
- [6] This diagram is taken from Thelin (1978:30).
- [7] The notions of 'realized' versus 'unrealized' can also be used to characterize sentences with aspect markers and those lacking aspect markers respectively. These two notions, however, have a disadvantage in that they include additional implications, and thus will not be used here.
- [8] This diagram is taken from Thelin (1978). It should be pointed out that Thelin (1978) was mainly concerned with the Slavic languages. In spite of this fact, his interpretation is relevant to the description of Chinese. (For more details concerning the Slavic facts, see Thelin (1978).)
- [9] Jakobson (1957:134) further made a distinction between 'shifters' and 'non-shifters'. Both designators and connectors may characterize the narrated event and/or its participants either without or with reference to the speech event (.../ES) or its participants (.../PS). Categories implying such a reference are to be termed 'shifters'; those without such a reference are 'non-shifters'.
- [10] Here, we are mainly concerned with the sense of *le2* bearing on the temporal reference of a sentence. The other senses of the sentence-final particle *le2* are beyond the scope of our description.
- [11] This interpretation of the 'perfect' is given by Galton (1976:187). In spite of the fact that he is mainly concerned with providing an explanation of the Slavic aspect, his characterization of the perfect bears on the function of the sentence-final particle *le2* in Chinese.
- [12] For example, Comrie (1976:56) lists the following types of perfect in English.

- i) perfect of result,
- ii) experiential perfect,
- iii) perfect of persistent situation,
- iv) perfect of recent past.

Dahl (1985) expresses some reservation on Comrie's treatment in that (i) - (iv) are types of uses of such categories, and they overlap quite considerably. Dahl, on the other hand, considers that *le₂* in Chinese should be categorized as 'resultative'.

- [13] Soga (1983) also pointed out that the 'experiential' aspect in Japanese has some sort of 'historical' overtone in the sense that it implies that the event has "truthfully" occurred.
- [14] Dahl (1985), on the other hand, compared the 'experiential' *guo*-construction in Chinese with the 'general factual' use of the Slavic Imperfective, which is defined by Comrie (1976:113) as follows: "There is no specific reference to the completeness of the event" and "the speaker is simply interested in expressing the bare fact that such and such an event did take place, with further implication". Dahl claims that the questions in (1) below are often used as a paradigm example of the 'general factual' use of the Slavic Imperfective (1985:143):

- (1) A. I want to give your brother a book to read,
but I don't know which. Is there any of
those books that he READ already?
B. (Yes) he READ this book.

Dahl thus holds that it is possible that both Chinese and Slavic are examples of a category 'non-resultative' past whose distribution might overlap with the 'experiential' and the past.

- [15] Another piece of evidence in support of the claim that *zhe* should be conceived of as a marker of aktionsart comes from its use as a verb, meaning 'to attach, append'. Despite the fact that it has been relegated to an auxiliary morpheme, being suffixed to the verb, this shade of meaning is still retained in it.

- [16] According to Comrie (1976), the progressive form in Modern English does not show any trace of being a locative construction. However, historically, it originated as a locative construction, as shown in (1):

(1) John is $\left. \begin{array}{c} \text{on} \\ \text{at} \\ \text{a-} \end{array} \right\}$ hunting.

The prepositions 'on, at' and later, the shortened form 'a-', are finally dropped altogether, resulting in the modern form of the progressive (cf. Bolinger, 1972).

- [17] The *you-le₁* alternation was first proposed by W. Wang (1965) to account for the phenomena of negation and question formation of sentences that involve the aspect markers *le₁*, *le₂*, and *guo*. As an illustration, we can take the facts of negation in Chinese.

In most sentences lacking the aspect markers, the marker of negation is *bu*, as shown in (1):

- (1) a. Ta chi-fan
he eat-rice
'He eats rice.'
- b. Ta bu chi-fan
he NEG eat-rice
'He does not eat rice.'

However, consider the sentences in (2), which contain the aspect marker *le₁*:

- (2) a. Wo chi le₁ san-wan fan
I eat le₁ three-cl. rice
'I have eaten three bowls of rice.'
- b. Wo nei(you) chi san-wan fan
I NEG eat three-cl. rice
'I did not eat three bowls of rice./
I have not eaten three bowls of rice.'

The negative sentence in (2b) contains '*you*' ('have'), which does not appear in the affirmative sentence. In addition, neither *le₁* nor *le₂* appears in the negative sentence.

Wang (1965) postulated that *le₁* and *you* are suppletive allomorphs of the

aspect marker, and that in the underlying structure this marker is generated as '-you' preceding the verb. Thus, the underlying structures of the sentences in (2) would be (3):

- (3) a. Wo you chi san-wan fan
 b. Wo NEG you chi san-wan fan

In (3b) the verb *you* ('have') conditions 'mei' as the form of the negative marker. To generate the surface form of (2a), an obligatory transformation, in the absence of NEG, moves *you* after the verb and changes it to *le*.

- [18] The Turkish examples are taken from Huang (1975).
 [19] This interpretation was first given by J.C. Thompson (1968:73).
 [20] The following examples are taken from Melchert (1980), who, in turn, has drawn from Hart (1971).

- (1) assessar-ma LUUBARUMTIM avantari-pat
 assembly-but foreigners stand-pat
 'But the assembly (and) the foreigners remain standing.'
- (2) nu - za man irmalanza esta,
 and (part.) although ill you were
 dUTUSi- -ma-tta ANA ASAR ABI-KA
 His Majesty-but-you in place your father
 tittanun-pat
 I put -pat
 'Although you were ill, I, His Majesty, went ahead and put you in the place of your father.'

According to Melchert (1980:651), (1) illustrates the use of *-pat* to express continuation of a state. (2), on the other hand, shows that *-pat* implies a fact contrary to expectation.

- [21] Alleton (1985) likens the absence of final particles in Chinese to the 'preterit' in French (passé simple).
 [22] Following Benveniste, Alleton (1985:112, fn. 4) takes the notion of 'discourse' to be understood in its widest meanings - that is, any utterance that implies a speak-

er and a hearer.

Chapter III

ASPECTUAL CLASSIFICATION OF VERBS IN CHINESE

3.1 Introduction

In this chapter I will attempt to investigate the semantic structure of Chinese verbs, and more accurately, the semantic property of the entire sentence, in terms of the notion of 'aktionsart', i.e., the intrinsic temporal nature (of a sentence). The semantic structure of verbs involving the notion of 'internal time reference' is still seldom touched upon, or totally ignored, by Chinese linguists.

The notion of aktionsart, as discussed in Chapter 1, concerns the inherent temporal nature of a situation. And the characterization of the inherent temporal property of a sentence is intimately bound up with the classification of events, processes, or states that verbs signify. For convenience of description, I will use Vendler's (1967) aspectual classification of verbs as a point of departure. But, as the analysis proceeds, I will modify his analysis, and finally I will set up a two-system classification of verbs in Chinese in terms of the notion of 'change' involved in a situation.

As we mentioned in Chapter 1, the aspect and the aktionsart of a sentence should be kept apart. The criterion which has been drawn upon for distinguishing aktionsart from aspect is the notion of 'change'. The presence versus absence of change constitutes the internal property of a situation. According to Platzack (1979:68), "in order to have a change, we require at least two situations, one valid before the change, the other valid after the change. When there is no change, only one situation is involved".

Thus, the basic distinction - 'change' vs 'no-change' for a situation - constitutes an essential criterion for a semantic division of sentences. Accordingly, sentences can be divided either as those referring to 'changes' or as those referring to 'no-change', namely, states. Different syntactic and semantic diagnostic tests have been established by linguists (e.g., Platzack 1979; Dowty 1979) to distinguish sentences referring to changes from those referring to states. For instance, the question 'what happened' can only be answered by a sentence referring to 'change' as in (1):

- (1) a. What happened?
 b. John has bought a new house.

In a word, the concept of change can be conceived of as the basis for the division in the realm of 'aktionsarten'. In the linguistic literature, different classifications have been put forward for situations involving the notion of 'change'. The category of state, on the other hand, is usually viewed as indivisible. The inherent aspectual classification of verbs, or more precisely, of sentences will be the topic of the next section.

3.1.1 Vendler's Four-Fold Classification of Verbs

In a paper widely accepted by linguists working in the fields of philosophy and linguistics for the last two decades, Vendler (1967) classifies English verbs into four groups, viz., states, activities, accomplishments, and achievements, as shown in (2):

(2)

States	Activities	Accomplishments	Achievements
know	run	paint a picture	recognize (a person)
believe	swim	make a chair	reach the summit
love	push a cart	build a house	win the race
have	drive a car	write a novel	lose
desire	walk	draw a circle	find

For Vendler, the essential factor in defining the four classes of verbs established is the notion of time; therefore, these four classes are termed four 'time schemata' and their definitions center on the way they relate to 'time'. Furthermore, in Vendler (1967), activities and accomplishments are grouped together as one category and are said to take place in time. The latter, however, differ significantly from the former in that they involve some intrinsic end or conclusion. States and achievements, on the other hand, are grouped together as another category, and they are different from activities and accomplishments. The differences between states and achievements with respect to time resides in the fact that states cannot be divided into phases qualitatively different from one another, and thus are not processes going on in time, whereas achievements always relate to a point in time and not to a period.

Vendler's four-fold classification of verbs has been considered to be a pioneering work; however, his classification suffers from several inherent flaws, which are due to the fact that the syntactic and semantic criteria used by him in distinguishing these four classes of verbs are inadequate. Firstly, as mentioned earlier, in Vendler's scheme, accomplishments and activities are grouped under one category, whereas achievements and states are under another. Vendler made such a distinction on the grounds that achievement verbs, which behave like state verbs, do not admit the progressive. This syntactic criterion drawn upon by Vendler to distinguish achievement verbs from accomplishments and activities has been challenged by Mourelatos (1981), who claims that some achievement verbs in English do admit the progressive as in (3):

(3) He is winning the race.

But, as Hollosy (1983) points out, the evidence presented by Mourelatos is not entirely accurate in that only a small number of the so-called achievement verbs can admit the progressive in English. Moreover, achievements are far from being a homogeneous group, contrary to Vendler's (1967) and Mourelatos' (1981) schema.[1] Secondly, as

Hollosoy (1983) notes, a number of state verbs in English present problems in that they may be converted into achievements without any morphological change. For example, (4a) refers to a stative meaning, whereas (4b) contains an achievement.

- (4) a. I knew John well. (state)
 b. I knew John at once. (achievement)

This difference is distinguished lexically in Chinese, as illustrated in (5):

- (5) a. Wo gen John hen shu (state)
 I and John very familiar (= 4a)
 b. Wo yixiazi jiu ba John ren-chu lai le₁
 I at once then BA John identify-emerge le₁
 (=4b) (Achievement)

'ren-chu' ('identify-emerge') in (5b) is a resultative verb compound in Chinese, being composed of two parts, the first part of which refers to an action, whereas the second part refers to a result. In this case, the second part 'chu' functions as a 'telic' aktion-sart marker, adding the concept of an end-point of the action denoted by the first verb. The semantic issues involved in this type of verb compounds will be discussed in Chapter 5.

Theoretically, Vendler's system also leaves much to be desired. Here, I raise two major inadequacies of his classification. In the first place, his classification is based on verbs as such. But, as Steedman (1977) points out, Vendler's scheme cannot be viewed as a classification of verbs or verb groups because the same verb group can occur in many categories. Thus, Steedman claims that Vendler's scheme is best regarded as a classification of the meaning of sentences, not of verb groups. Secondly, as noted by Hollosy (1983), Vendler (1967) did not distinguish achievements that start activities (e.g., find) and achievements that initiate a state (e.g., know). Instead, he lumped them together into one group (See Steedman (1977) and Hollosy (1983) for further details).[2]

For all its shortcomings, Vendler's classification has served as a starting point for a number of other recent studies (e.g., Dowty 1979; Mourelatos 1981; L. Carlson 1981). In this chapter I still take Vendler's classification as a point of departure for the description of Chinese verbs. Vendler's system will be further discussed in Section 3.2.2.

3.2 Classification of Verbs in Chinese

3.2.1 Previous Analyses

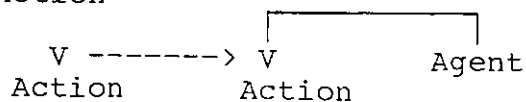
3.2.1.1 Teng's (1975) Classification

Before embarking on the discussion of aspectual classification of verbs put forward in the present chapter, I will first deal briefly with two previous approaches bearing on some of the issues to be raised here. The first analysis was given by Teng (1975), who attempted to provide a classification of verbs in Chinese in terms of transitivity relations, i.e., the participants in a sentence. His approach can be characterized as a synthesis of three grammatical theories - Fillmore's (1968) Case Grammar, Halliday's (1967) systematic grammar and Chafe's (1970) grammatical analysis - of which Chafe's semantic theory plays a dominant role. The main purpose of his study is to investigate the semantic roles of nominal elements occurring in a sentence. To achieve this, he first set up a set of transitivity relations, namely, Agent, Patient, Range, Goal and Causer, to account for the various ranges of the syntactic notion of subject and object (in a sentence). These relations are developed within the semantic framework suggested in Chafe (1970). That is, the interrelationship between verbs and nouns is first specified and the classification of verbs is established in terms of these relations.

Before proceeding further, a few remarks on the Chafian approach seem to be in order here. The theory proposed by Chafe (1970) can be described as Verb-centrality (cf. Teng, 1975). That is, every sentence is built around a predicative element, which is viewed as a necessary component of most types of sentences, and can usually be referred to as a verb. In most cases, a verb is accompanied by one or more arguments. The semantic roles which the accompanying arguments play in a given sentence are not independently selected, but are specified by verbs in question. In other words, once a type of verb is selected, a definite role is automatically assigned to the nouns which accompany the verb.

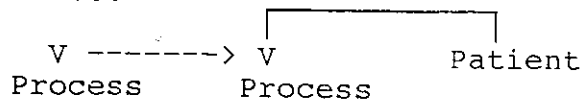
Within the Chafian framework, verbs are classified into four categories by means of three basic (semantic) selectional units (or features) - action, process, and state - as shown in (6) taken from Chafe (1970):

(6) a. Action

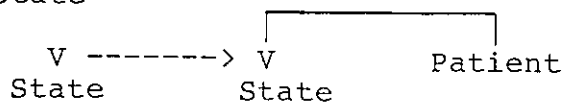


e.g. 'Michael ran.'

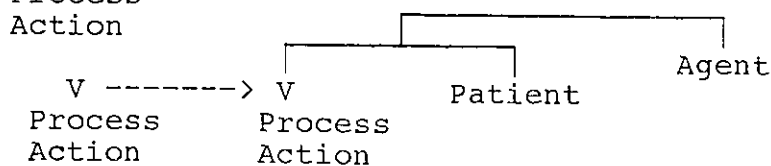
b. Process

e.g. 'The wood dried.'
'He died.'

c. State

e.g. 'The wood is dried.'
'He is tall.'

d. Process



e.g. 'Michael dried the wood.'

Following Chafe (1970), Teng (1975) also groups verbs in Chinese into three classes - Action, State and Process. Action verbs refer to activities, both physical and mental. State verbs define quality and condition, and process verbs denote change-of-state. These three classes are exemplified in (7):

(7)	Action	State	Process
	ku 'cry'	gao 'tall'	si 'die'
	fei 'fly'	pang 'fat'	po 'break'
	chi 'eat'	zhidao 'know'	wan 'finish'
	zhao 'look for'	hen 'hate'	kai 'open'

In the case of the English verb 'find', a morphological process - lexical suppletion - has been applied in the derivation; this process, however, does not apply in the Chinese verb derivation. Teng (1975) also considers this type of compound verbs in Chinese to be derived morphologically.

The second type of derived verbs is termed the category of 'causative' verbs by Teng. First, consider

- (10) a. Pingzi po le₁
 bottle break le₁
 'The bottle broke.'
- b. Ta ba pingzi nong-po le₁
 he BA bottle make-break le₁
 'He broke the bottle.'
- c. *Ta po le₁ pingzi
 he break le₁ bottle
 'He broke the bottle.'

Teng contends that this type of causative construction, e.g., 'make-break', as in (10b), is 'analytic' in Chinese, but incorporated in English. And he suggests the following underlying configuration for the 'causative' verbs in Chinese.

- (11) a. V -----> V
 Process Process
 Action
 po 'break' po + Causative

- b. po + causative ----> 'nong + po' ('break')

Teng, however, did not specify whether 'causative' verbs in Chinese should be 'lexically' or 'transformationally' derived.[3]

The third type of 'derived' verbs, as stated by Teng, incorporates the semantic feature of 'direction', as shown in (12) and (13) respectively:

- (12) a. Ta mái le₁ yi-liang qiche
 he buy le₁ one - cl. car
 'He bought a car.'
- b. Ta mài le₁ yi-liang qiche
 he sell le₁ one - cl. car
 'He sold a car.'
- (13) a. Ta jiao yingwen
 he teach English
 'He teaches/is teaching English.'
- b. Ta xue yingwen
 he learn English
 'He is learning English.'

Teng argues that the semantic differences shown in these pairs of verbs are not results of different subject selections, namely, semantic roles, but are results of incorporating different 'direction' features. That is, 'mái' ('buy') and 'xue' ('learn') incorporate the 'inward' feature, whereas 'mài' ('sell') and 'jiao' ('teach') incorporate the 'outward' feature. The same event, he claims, can be reported in two dimensions - either 'inward' or 'outward' - as far as the speaker is concerned. The incorporation of the semantic feature 'direction' also occurs in another pair of verbs as in (14):

- (14) a. Ta ba men la-kai
 he BA door pull-open
 'He pulled the door open.'
- b. Ta ba men tui-kai
 he BA door push-open
 'He pushed the door open.'

According to Teng, 'la' ('pull') incorporates 'inward', and 'tui' ('push'), 'outward' direction and these verbs are in suppletive relation. For the explication of the semantic differences among the above pairs of verbs, he posits their lexical derivations as follows (1975:29):

- (15) a. V ----->
 Process 'la' ('pull')
 Action
 root + inward 'mǎi' ('buy')
- b. V ----->
 Process 'tui' ('push')
 Action
 root + outward 'mài' ('sell')

Teng (1975) has decidedly thrown some light on the semantic features involved in the verbs in Chinese; however, his system suffers from some inadequacies. This is due mainly to the fact that his study, in more precise terms, is not so much a classification of verbs as an investigation of the defining properties of the semantic roles involved in the nominal elements occurring in a sentence. Thus, in Teng's analysis, the differences between Agent and Patient are equated to those between Action verbs and Non-Action verbs. But what is at issue here is his treatment of the so-called 'derived' verbs. Verb derivations in Teng (1975) are achieved through a mechanism of 'feature incorporation'. For instance, Teng claims that many state verbs in Chinese can also refer to 'process', and the transformation from 'state' to 'process' is accomplished through the incorporation of the semantic feature 'inchoative', as shown in (16) and (17):

- (16) V -----> V
 State Process
 root root + inchoative
- e.g. gao 'tall' ----> gao (le) 'grow'
 pang 'fat' ----> pang (le) 'gain (weight)'
- (17). a. Ta hen pang
 he very fat
 'He is very fat.'
- b. Ta pang le₁ shi bang
 he gain le₁ ten pound
 'He gained/has gained ten pounds (in weight).'

One thing to note here is that in Teng's analysis the aspect marker *le*₁ is treated as a verbal suffix, referring to the 'inchoative' aspect. Hence, in (17b), *le*₁ is construed as the surface realization of the semantic feature 'inchoative'.^[4] But, as I see it, Teng's analysis of state verbs, which are taken as being converted into process verbs, is misleading. For one thing, the aspect marker *le*₁, as discussed in Chapter 2, has nothing to do with the semantic feature 'inchoative', and its main function is to denote 'succession' of events. For another, these state verbs, such as 'pang' ('fat') in (17), are converted into achievements, in Vendler's terminology, rather than into processes. Thus, they refer to a change of state resultant from another state. And the function of the aspect marker *le*₁ is to link these two states into a succession. Analyzed from this standpoint, (17b) can be interpreted literally as 'he has ten pounds more than before, as far as his weight is concerned'. Recall that in the previous section I have mentioned that in English a number of state verbs may be converted into achievements without any morphological changes, such as 'know'. These state verbs in Chinese behave exactly the same as those in English. That is, they are converted into achievements without any morphological changes. The same problem is also found in his analysis of another type of derived verbs, i.e., the incorporation of the semantic feature 'successful', with action verbs like 'zhao-dao' ('find') in (9). In fact, this type of verb compounds falls into the category of 'grammaticalized' RV compounds in Chinese. As we shall see in Chapter 5, the second element of the compound functions as a 'telic' aktionsart marker, adding the notion of an endpoint to the action (denoted by the first verb).

Finally, Teng's analysis of the so-called derived 'causative' verbs in Chinese, as shown in (11), repeated below as (18), is also quite problematic.

- (18) V -----> V
 Process Process
 Action
- root root + Causative
- e.g. 'po' 'break' -----> 'nong-po' ('make-break')
- 'si' 'die' -----> 'da-si' ('hit-die')

Action verbs like 'nong' ('make') and 'da' ('hit') in (18), are treated as 'causative' markers by Teng. In other words, it is the incorporation of the semantic feature of 'causative' from which this type of causative verb compounds is derived. However, Teng does not explain in what way the 'incorporated' causative marker, i.e., the action verb of the compound, is related to the 'root' verb. As far as I can see, it is a mistake on Teng's part to interpret the first verb of the compound as a 'causative' marker as such. This shortcoming of Teng's analysis stems largely from his misinterpretation of the semantic nature of causation in general, and the 'causal relation' involved in this type of compound verbs in Chinese in particular. As we shall see in Chapter 5, central to the interpretation of the semantic nature of causation are two notions, namely, action and event. The former is performed, whereas the latter is caused (cf. Vendler, 1984b). This type of 'derived' causative verbs suggested by Teng (1977) falls into the class of 'lexicalized' resultative compound verbs in the present thesis. Syntactically, a 'lexicalized' resultative compound verb consists of an 'action' verb and an 'achievement' verb, with the former being used to assert the performance of the 'task' activity, while the latter is used to specify the event following as a consequence of the performance of that task activity. Much more will be said about this class of compound verbs in Chapter 5.

Given the above deficiencies, Teng's (1975) classification of verbs fails to provide an adequate description of verbs in Chinese as a whole.

3.2.1.2 Tai's (1984) Observations

In his article on "Verbs and Times in Chinese: Vendler's Four Categories", Tai (1984) attempts to investigate the essential characteristics of the temporal structure underlying the Chinese verb system in terms of Vendler's four-fold classification of verbs, as discussed in the previous section. In particular, Tai attempts to explore the fundamental difference between Chinese and English with respect to the notion of time. These two issues dealt with by Tai (1984), in effect, are interrelated in that Vendler's four categories of verbs were originally established for English verbs. The classifying criteria - both syntactic and semantic - set up by Vendler (1967), and following him, by Dowty (1979), and others, are based entirely on the semantic properties involved in English verbs despite the fact that the criteria chosen by these linguists are meant to reveal the inherent temporal properties of kinds of verbs across languages.

Tai (1984) has made two essential claims on the subject of the Chinese verb system in terms of Vendler's four categories. The first concerns the category of accomplishment verbs in Chinese, which, according to Tai, differ considerably from their English counterparts. To cite an example, in English, 'to study' is an activity verb, but 'to learn' is an accomplishment verb (in Vendler's classification). The difference between activities and accomplishments can be distinguished by invoking one of the criteria set up by Vendler (1967) and Dowty (1979), viz., the adverbial phrase 'for X time' versus 'in X time'. 'For-phrases' indicate activities, but 'in-phrases' identify accomplishments. First, consider the following examples taken from Tai (1984:290):

- (19) a. He has studied Chinese for five years.
 b. *He has learned Chinese for five years.
 c. *He had studied Chinese in five years.
 d. He has learned Chinese in five years.
 e. *It took him five years to study Chinese.
 f. It took him five years to learn Chinese.

In a sense, the difference between 'to learn' and 'to study' consists in the fact that the former, but not the latter, implies an attainment of goal. As far as Chinese is concerned, Tai states that the Chinese equivalent for 'to study' is 'xue', and that for 'to learn' is 'xue-hui' ('study-know'). 'Xue-hui' is a resultative verb compound with 'xue' denoting 'action' and 'hui', 'result'. He adds that the Chinese pair of verbs shows the same syntactic differences as the English pair. This is exemplified in (20), the Chinese counterpart of (19).

- (20) a. Ta xue-le₁ wu nian (de) Zhongwen
 he study-le₁ five year Poss Chinese
 b. *Ta xue-hui le₁ wu-nian de Zhongwen
 he study-know le₁ five-year Poss Chinese
 c. *Ta zai wu-nian nei xue le₁ zhongwen
 he in five-year study le₁ Chinese
 d. Ta zai wu-nian nei xue-hui le₁ Zhongwen
 he in five-year study-know le₁ Chinese
 e. *Ta hua le₁ wu-nian cai xue le₂
 he spend le₁ five year then study le₂
 Zhongwen
 Chinese
 f. Ta hua le₁ wu-nian cai xue-hui
 he spend le₁ five year then study-known
 Zhongwen
 Chinese

Tai further points out that Vendler's examples of accomplishment expressions such as 'to paint a picture' and 'to write a letter' may or may not imply the attainment of a goal in Chinese, as illustrated in (21) and (22) respectively:

- (21) a. Ta zuotian hua le₁ yi-fu hua
 he yesterday paint le₁ one-cl. picture
 'He painted a picture yesterday.'
- b. Ta zuotian xie le₁ yi-feng xin
 he yesterday write le₁ one-cl. letter
 'He wrote a letter yesterday.'
- (22) a. Ta zuotian hua le₁ yi-fu hua,
 he yesterday paint le₁ one-cl. picture
 keshi mai hua-wan
 but NEG paint-finish
 ?'He painted a picture but he didn't finish
 it.'
- b. Ta zuotian xie le₁ yi-feng xin,
 he yesterday write le₁ one-cl. letter
 keshi mai xie-wan
 but NEG. write-finish
 ?'He wrote a letter yesterday but he didn't
 finish it.'

He claims that the sentences in (21) may imply the attainment of goal. Yet the implication is not absolute, as demonstrated by the sentences in (22), in which the implication is negated. On the other hand, if the resultative verb compounds are used, there is only one implication - the attainment of a goal. In view of this fact, Tai holds that accomplishment verbs and resultative verb compounds are different in a fundamental manner: "While an accomplishment verb in English has both action and result aspects, a resultative verb compound in Chinese has only the result aspect" (1984:292). One piece of evidence presented by Tai in support of his argument is that resultative verb compounds in Chinese cannot occur in the progressive tense, even though its first element, which is identical to an activity verb, can occur with the progressive. On the other hand, both accomplishment and activity verbs in English can occur in the progressive tense. Consider

- (23) a. Ta zai xue Zhongwen
 he zai study Chinese
 'He is studying Chinese.'
- b. *Ta zai xue-hui Zhongwen
 he zai study-know Chinese
 'He is learning Chinese.'
- (24) a. Ta zai hua yi-fu hua
 he zai paint one-cl. picture
 'He is painting a picture.'
- b. *Ta zai hua-wan yi-fu hua
 he zai paint-finish one-cl. picture
 'He is finishing a picture.'

Another piece of evidence cited by Tai in support of his assumption concerns the semantic scope of negation with the resultative verb compound in Chinese. According to Tai (1984:293), the English example in (25) is ambiguous in that it has both action and result interpretations; however, the Chinese example in (26a), i.e., a resultative verb compound, has only the result interpretation, whereas (26b) has only the action interpretation:

- (25) John didn't learn Chinese.
- (26) a. Zhangsan mei xue-hui Zhongwen
 Zhangsan NEG study-know Chinese
 'Zhangsan didn't/hasn't learned Chinese.'
- b. Zhangsan mei xue Zhongwen
 Zhangsan NEG study Chinese
 'Zhangsan didn't study Chinese.'

For this reason Tai claims that Chinese does not have the category of accomplishment verbs. Instead, Chinese resorts to the category of resultative verb compounds.

Tai's (1984) second claim is concerned with the achievement verbs in Chinese. For the most part, achievement verbs in English are also expressed by resultative verb compounds in Chinese, as illustrated below:

(27)	English	Chinese
	find	zhao-dao 'look for-reach'
	receive	shou-dao 'collect-reach'
	see	kan-jian 'look-see'

As a result of the above observations, Tai (1984) concludes that Chinese displays three categories of verbs pertaining to the notion of time, viz., states, activities, and results. There is much more to be said about Tai's (1984) approach, some of which I will return to in the next section.

3.2.2 Aspectual Differences Between English and Chinese Verbs

In Section 3.1.1 I have mentioned in passing that the notion of time plays an essential role in Vendler's classification of English verbs. To put it more exactly, crucial to Vendler's specification of the four categories of verbs is not the notion of time, but the notion of length of time (required for events). In other words, the definitions of Vendler's four classes of verbs revolve around a distinction of length of time required for one class of verbs over against the other. This is particularly true with regard to the distinction made between accomplishment and achievement verbs in Vendler (1967). A fundamental difference between accomplishments and achievements lies in the fact that the former refer to 'period of time', whereas the latter refer to 'point of time'.^[5] At this point, a question arises: What is the difference between English and Chinese verbs, as far as the notion of time is concerned. To provide an adequate answer to this question, we first have to look into the inherent aspectual differences between English and Chinese verbs.

In this regard, Poldauf (1982) has made some very penetrating remarks on the semantic nature of verbs in English as contrasted with verbs in the Slavonic languages.

Borrowing from the terminology of mathematics and physics, he characterizes the difference between the English verb and that of the Slavonic languages as '*vectorial*' versus '*scalarial*'. [6] According to Poldauf (1982:308), the finite verb in English is "a cluster of semantic features placed in a time 'compartment' and possessing not only a specific 'value' (a complex of qualities) but also a direction or sense". On the contrary, in the Slavonic languages, the verb "has its specific 'value' (the 'magnitude' of the quantifiable world) which is placed simply inside a sphere without even facing towards another".

To further illustrate the difference between the verbs in English and those in the Slavonic languages, Poldauf claims that, in English, even if the verb content is non-action (i.e., a state) it is still directed, being conceived by the speaker as filling time space from a certain bottom towards a certain top. For example, sentence (28)

(28) Leaves have been green for a long time now.

shows that 'being green' is conceived of as reaching somewhere - to the boundary between now and later than now. In a word, it implies some consequence.

In the Slavonic languages, according to Poldauf (1983), sentence (28) is roughly rendered as 'Leaves are green for a long time now'. It refers to "a process, which, though pragmatically proceeding in time, is conceived in bulk and allotted its place in a time sphere in the entirety of the verb content" (1983:308).

In light of these distinct semantic properties as displayed in English verbs and those of the Slavonic languages respectively, Poldauf (1982) attempts to explicate the aspectual differences involved in the simple/progressive opposition in English on the one hand, and the perfective/imperfective distinction in the Slavonic languages on the other. First, he likens the simple/progressive opposition in English to a distinction between '*photographing*' and '*filming*': The be-ing periphrasis (i.e., the progressive)

films a process, taking into view, scanning as it were, every single detail composing its continuity, while the simple form gives a static photograph of it. Photographing, Poldauf maintains, does not deprive the verb of its procedural character, but merely presents its content in a frozen, condensed fashion.

Hollosy (1977, 1980), on the other hand, has approached the simple/progressive distinction in English from a similar, but slightly different, point of view. She characterizes the progressive form in English as representing an event 'analytically' ('from within') and the simple form as representing an event 'synoptically' ('from without'). An event, Hollosy asserts, can be viewed either analytically or synoptically. This distinction can be seen by contrasting the (a) sentences with the (b) sentences of (29-30):

- (29) a. He got up for an hour.
 b. He was getting up for an hour.
- (30) a. I've understood it better and better recently.
 b. I've been understanding it better and better recently.

The (a) sentences of (29-30) are in the simple form, whereas the (b) sentences of (29-30) are in the progressive form. The semantic nature of the verbs involved in (29) and (30) calls for some elaboration. Verbs like 'get up' in (29) refer to the end-phase of an event, or in Bull's terminology (1968:44), a cyclic event in the sense of an occurrence in which the end-point is central for the event itself. The function of the progressive form in (29b) is, so to speak, to prevent the event from reaching its end-point, as the action is presented analytically, i.e., 'from within'. This interpretation of the progressive form tallies with Poldauf's notion of 'filming'. The event in (29a), which is in the simple form, on the other hand, is presented 'synoptically', i.e., 'from without'. The function of the durational adverbial 'for an hour' is to measure the length of an event. Verbs like 'understand' in (30) refer to, in Vendler's (1967) terminology, a

state. Smith (1983:497) in this connection claims that "the progressive stative sentences present a state as an event, endowing the state with the properties of events. The relevant properties of events seem to be activity and successive stages, which together constitute the dynamics that differentiate events from states". Taken in this way, (30b) refers to an event, which is presented analytically.

Second, Poldauf contrasts the aspectual properties inherent in the English progressive with those inherent in the perfective (of the Slavonic languages). According to Poldauf (1982:312), the progressive "makes a film of something unwinding, developing, progressing in phases, which is a kind of directed verb content", whereas the perfective "presents something placed in time (in a time sphere) and having extent in it as a rounded-off, self-enclosed unit of happening, while 'having extent' is a kind of non-directed verb content". More exactly, 'progress' is of a 'vectorial' nature, whereas 'extent' is of a 'scalarial' nature (See also footnote 6). 'Progress', he further points out, can be "either filmed or photographed without having its directional character destroyed"; 'extent', on the other hand, can be conceived of as a whole in its entirety or as being "condensed, compressed ... tabletized". Hence, what the imperfective member of an aspectual pair of verbs gives is a "wide-open view" of the verb content, and what the perfective member introduces is a "narrowing-down, reversed opera-glass view" of the verb content. This perfective/imperfective distinction can be illustrated by the following examples in Russian taken from Bache (1985:6). The perfective construction in Russian in (31),

(31) On pročital knigu (Perfective)

which corresponds roughly to 'he read the book' in English, reports that the process of reading was completed - that is, that the reader actually finished the book - whereas the imperfective construction in (32)

(32) On čital knigu (Imperfective)

merely reports the fact that the process of reading took place but not necessarily that the reader finished the book.

The difference between the aspectual properties inherent in the English progressive and those inherent in the perfective (of the Slavonic languages) can be looked at from another perspective. Theoretically, Poldauf states, neither filming nor photographing requires "any point to set off from or to end up at", but an entire view and a condensed view "*presuppose* some centre or some point of convergence or some limits. As extending in time and viewed in entirety or convergently, verbal content easily acquires the character of something phased: being nearer to the beginning or nearer to the end of whatever extends, or floating somewhere in between" (1982:312). Consequently, what is brought into prominence is the distinction of telic (i.e., bounded) and atelic (i.e., unbounded) verb contents. 'Telic' senses imply "a final state consummating a process or a passage to a different state as a result of change or they are themselves references to the achievement of such a state". 'Atelic' senses, on the other hand, refer to "states, relations or processes".

Poldauf's (1982) description of the telic/atelic distinction bears some analogy to Vendler's (1967) classification of verbs, as discussed in Section 3.1.1. While states and activities in Vendler's system refer to an 'atelic' verb content, accomplishments and achievements refer to a 'telic' verb content. I will return to this point below.

Summarizing the difference between the English vectorial verb and the Slavonic scalarial verb, Poldauf holds that while the former leads to a much more narrowly grammatical character of simple/progressive distinction, the latter resorts more to semantic (and lexical) means because of its non-directed verb content, which is construed as a cluster of semantic features situated inside a time sphere.

It should be pointed out here that the description given by Poldauf (1982) with regard to the semantic distinction between the English verb and that of the Slavonic languages is, in fact, quite sketchy in nature. In spite of this fact, his vectorial/scalarial distinction in the characterization of the semantic nature of verbs in different languages does offer us an alternative way to investigate the semantic differences among languages. And the vectorial/scalarial distinction, in my view, has a bearing on the discussion of the inherent aspectual differences between English and Chinese verbs. What concerns us here in particular are the following questions: 1) Does Poldauf's characterization of English - a vectorial-verb language - relate to Vendler's (1967) four-fold classification of verbs in English? 2) How does Chinese fare with respect to his description of Slavonic languages? Or put differently, does Chinese fall into the category of scalarial verb languages? An adequate description of aspectual differences between English and Chinese verbs, it seems to me, hinges on the clarification of these two issues.

As to the first question, the answer is in the affirmative. That is, Poldauf's characterization of English verbs not only relates to Vendler's classification, but also serves to explain the thesis underlying his analysis. In actual fact, a major part of the syntactic and semantic tests set up by Vendler (1967), and following him, other linguists (e.g. Dowty 1979; L. Carlson 1981, etc.) in defining the four classes of verbs have to do, directly or indirectly, with the 'vectorial' character of the English verb.[7]

As we have seen, the assumption that underlies Vendler's four-fold classification of English verbs is the notion of 'length of time', which has been invoked in the distinction between accomplishment and achievement sentences in English, as discussed (see also footnote 5). It seems that the notion of 'length of time' fits the vectorial character of the English verb, which has a 'directed' verb content. The characteristic feature of

the 'directed' nature of English verbs is such that the aspectual properties are essentially expressed through 'syntactic' means. This is particularly true with respect to accomplishment and achievement sentences in English.

The 'vectorial' character of the English verb, though it is still not widely understood by most linguists, has been indirectly mentioned by some. For example, Dowty (1986) points out that the aspectual properties of English sentences are not determined simply by the lexical main verbs, as Vendler (1967) and Kenny (1963) maintained. According to Dowty, the aspectual class of a verb is a property of its lexical meaning; however, the aspectual class that a phrase or a sentence belongs to is determined by the lexical aspectual class of its main verb and the compositional semantic rules that have applied in combining the NPs, adverbials, tenses, and other constituents involved in the whole sentence. For instance, a prepositional phrase or NP expressing 'extent' can convert an activity into an accomplishment, as can be seen from the examples in (33) taken from Dowty (1986):

- (33) a. John walked. (Activity)
 b. John walked to the station. (Accomplishment)
 c. John walked a mile. (Accomplishment)

Similarly, the choice of durational adverbials, as Dowty points out, can disambiguate the aspectual interpretation of a sentence: The durational adverbial 'for X time' occurs only with activities, whereas 'in X time' occurs only with achievements and accomplishments. The following comprise Dowty's examples, illustrating this aspectual difference:

- (34) a. John read a book in two hours.
 b. John read a book for two hours.

(34a) has the accomplishment interpretation of 'read a book' (i.e., read the whole book); (34b), on the other hand, has only the activity interpretation (i.e., read from the book).

Furthermore, the presence of an indefinite plural NP or mass NP can render a sentence that would otherwise be an achievement into an activity. The sentences in (35) are also due to Dowty (1986:39).

- (35) a. John noticed the rare seashells on the beach.
(Achievement)
- b. John noticed rare seashells on the beach.
(Activity)

Hollosoy (1983) differs with Dowty on this point and holds that (35b) is turned into a series of achievements rather than into an activity. As I see it, Hollosy (1983) is correct on this point in that the verb 'notice' in (35) refers to, in Bull's (1968) terminology, a 'cyclic' event in the sense that the endpoint plays a pivotal role in the event itself. However, a single event may become a series of events. That is, the endpoint serves as the starting point of another event. Taken in this way, (35a) indicates a single event, but (35b) indicates a series of events, i.e., the same event repeating itself.

From what has been said, it clearly shows that the aspectual properties of English sentences are of a 'compositional' nature, which, in turn, have to do with the 'directed' verb content of the English verb, to which I shall return below.

Next, we turn to the second question raised above. That is, does Chinese fall into the category of 'scalarial-verb' languages, as do the Slavonic languages? The answer to this question is also in the affirmative. It is essential to note here that Poldauf's (1982) semantic description of the characteristic features of the Slavonic verbs, as discussed earlier, is perfectly applicable to the Chinese verbs, which, to a great extent, possess all the semantic features of 'scalarial-verb' languages. Thus, verbs in Chinese also have a 'non-directed' verb content, which can be construed as a cluster of semantic features situated inside a time sphere. This salient characteristic of a 'non-directed' verb content, according to Poldauf (1982), consists in the fact that verbs possess only 'ex-

tent', which can be conceived of as a whole in its entirety or as being condensed. Furthermore, 'scalarial-verb' languages resort more to 'lexical' rather than to 'grammatical' means, as do the 'vectorial-verb' languages like English.

This semantic characteristic of the Chinese verbs can be seen by contrasting the aspectual properties involved in the perfective/imperfective distinction in the Slavonic verbs such as Russian, as shown in (31) and (32), with those involved in the Chinese verbs. For example, the perfective/imperfective distinction in Russian, as shown in (31) and (32), can be rendered into Chinese as (36) and (37) respectively:

(36) Ta kan-wan le₁ nei-ben shu (le₂)
 he read-finish le₁ that-cl. book (le₂)
 'He finished reading the book.' (= 31)

(37) Ta kan le₁ nei-ben shu
 he read le₁ that-cl. book
 'He read the book.' (= 32)

The Chinese sentences in (36) and (37), by and large, do not differ in essential respects from the Russian examples: (36), which corresponds roughly to the perfective construction in (31), states that 'he finished reading the whole book', whereas (37), which corresponds to the imperfective construction in (32), merely states the fact that the process of reading took place but not necessarily that he finished reading the book. This point is attested by the fact that (37) can be negated, as in (38):

(38) Ta kan le₁ nei-ben shu, keshi meiyou
 he read le₁ that-cl. book but NEG
 kan-wan
 read-finish
 'He did some reading (of the book), but did not finish it.'

Another thing to note is that the Chinese example in (36) resorts to a resultative compound verb, i.e., 'kan-wan' ('read-finish'), in expressing the completion of the action, i.e., 'reading'. The second part of the compound, i.e., 'wan' ('finish'), indicates explicitly the termination of the action. In a sense, it presents a 'narrowing-down' (or 'con-

densed') view of an event. (37), on the other hand, does not have the implication of the completion of the action, namely, 'reading the whole book' and thus can be said to present a 'wide-open' view of an event. Interpreted from this standpoint, the meanings conveyed by the sentences in (36) and (37) tally with the semantic description of the 'scalarial-verb' languages given by Poldauf (1982), as discussed. In short, Chinese falls into the category of 'scalarial-verb' languages.

In the previous section we have seen that both accomplishment and achievement sentences in English are expressed through resultative verb compounds in Chinese. Tai (1984), as discussed, has observed this fact. However, he has failed to come up with a satisfactory explanation of the semantic and aspectual differences involved that set the Chinese verbs apart from their English counterparts. As has just been shown, Chinese belongs to the category of scalarial-verb languages, whereas English belongs to the category of vectorial-verb languages. Taken in this way, the aspectual differences between English and Chinese verbs can also be characterized as 'vectorial' versus 'scalarial'. That is, while English verbs are 'directed', Chinese verbs are 'non-directed', as far as verb content is concerned.

In light of the above semantic distinction, we can shed real light on the aspectual differences between accomplishments and achievements in English and resultative verb compounds in Chinese. More importantly, we can get to the bottom of the underlying differences that set verbs in Chinese apart from those in English. To start with, let us take a closer look at the internal structure involved in accomplishments and achievements in English, as in (39), in contrast with that of resultative verb compounds in Chinese, as in (40):

- (39) a. He wrote a letter. (accomplishment)
 b. John walked five miles. (accomplishment)
 c. I found my book. (achievement)
- (40) a. Ta xie-wan le₁ yi-feng xin
 he write-finish le₁ one-cl. letter
 b. John zou-wan le₁ wu li lu
 John walk-finish le₁ five mile distance
 c. Wo zhao-zhao le₁ wo de shu
 I look for-reach le₁ I Poss. book

Resultative verb compounds in Chinese, as shown by the examples in (40), consist of two parts - action and result - which are explicitly indicated. For instance, 'xie-wan' in (40a) is composed of 'xie' ('write'), referring to the action, and 'wan' ('finish'), referring to the result (of the action). The internal structure involved in accomplishments and achievements in English, as compared with the resultative verb compounds in Chinese, is not so explicitly indicated, and thus requires further explanation. Notice that the English counterparts of the resultative verb compounds in Chinese, as in (39), all involve a verb phrase, viz., 'write a letter', 'find my book', and 'walk five miles'. Essentially, accomplishments and achievements can be interpreted as actions that involve an outcome or product, which is implied but not explicitly articulated. This is particularly true with regard to accomplishments, which can actually be viewed as a combination of activity and achievement - that is, activities which are accompanied by a conventional point of termination, at which point the activity is said to be accomplished. For example, the accomplishment verb phrases in (39a) and (39b) - 'write a letter' and 'walk five miles' - all involve an activity and a specific noun phrase, which indicates the terminal point of an event. Achievements in English, on the other hand, can be interpreted as referring to events that have no duration (cf. Freed, 1979). In more precise terms, achievements denote the endpoint (of an event), which is implied, with the activity being left unspecified. Taken in terms of the internal structure

involved, accomplishments and achievements in English do not differ in essential respects from resultative verb compounds in Chinese, except that the end-point achievement (i.e., the result) in both accomplishments and achievements in English is implied but not explicitly articulated, whereas both action and result (i.e., the end-point achievement) are explicitly expressed in resultative verb compounds in Chinese. And herein lies their semantic difference, which is due primarily to their difference in syntactic composition. While resultative verb compounds are lexically derived, accomplishments (and achievements) in English are formed by syntactic means. This difference in derivation between resultative verb compounds in Chinese and accomplishments (and achievements) in English, to a great extent, bears on the semantic distinction in verbal content between English and Chinese verbs. As pointed out above, English is a vectorial-verb language, but Chinese is a scalarial-verb language. Hence, verbs in English are 'directed' in the sense that the action is conceived of as reaching somewhere (in a time sphere), whereas verbs in Chinese are 'non-directed' in the sense that the action is confined inside a time sphere. This fundamental semantic distinction suffices to explicate the aspectual differences between accomplishments in English and resultative verb compounds in Chinese. Notice that the semantic notion involved in accomplishments and achievements in English on the one hand, and resultative verb compounds in Chinese on the other, all of which can be seen as events, is the notion of 'change' (or 'change of state', Smith 1983).[8] However, the notion of change pertaining to linguistic description is interpreted differently in English and in Chinese, and herein lies the aspectual distinction between accomplishments in English and resultative verb compounds in Chinese. As far as accomplishments in English are concerned, the notion of change proceeds from one stage to another, that is, from beginning to completion (i.e., the terminal point) (cf. Smith 1983; see fn. 8). In a word, the 'action' progresses in a certain 'direction' by virtue of the 'vectorial' character

of the English verb. This semantic character of the English verb explains the underlying reason why accomplishments in English are composed syntactically - a combination of activity and achievement - as shown by the examples in (39).

As to the resultative verb compounds in Chinese, the notion of change, however, cannot be conceived of as progressing in a 'direction' (in a time sphere) because of its 'non-directed' verb content. The Chinese verb shows only 'extent' (in a time sphere). The consequence of this is that an event (denoted by a verb) in Chinese is presented wholly or partially. Differently put, an event can be viewed either as a whole in its entirety or as being condensed. Interpreted in this way, the notion of change cannot be construed as 'progressing' in stages towards a direction in a time sphere, but only as extending in time. As a result, the Chinese verb assumes a character of something phased. That is, an entire view or a convergent view is presented. It is essential to note that the salient characteristic of the resultative verb compounds in Chinese, for example, 'xie-wan' ('write-finish'), 'zhao-zhao' ('look for-reach') and 'zou-wan' ('walk-finish') in (40), is that they place the focus on the resultative phase of an event, which arises from the action. This fact explains the reason why the end-point achievement is explicitly articulated in the resultative verb compounds, and more importantly, why Chinese falls back on lexically derived verb compounds for the expression of completion of an event. Furthermore, the derivational processes in Chinese have effects on the inherent temporal properties of the verbs on which they operate. By definition, derivation creates new lexemes.[9]

Another aspect of accomplishments in English merits mention here. As we noted earlier, the attainment of goal (i.e., the end-point achievement) is only implied in accomplishment verbs and verb phrases in English. However, as noted by some linguists (e.g. Tai, 1984), when they are in past or perfect tenses, accomplishment verbs or

verb phrases necessarily indicate an attainment of a goal. For example, each of the sentences in (39) shows that the goal, i.e., the terminal point, has been attained. Hence, they all can be interpreted as 'completed' events. This fact, however, does raise an interesting question: Why do accomplishments in English have to be construed as having attained an endpoint, when they are in past or perfective tense? In this connection Kabakciev (1984) has provided some very revealing observations. In his view, a perfective action (in any language) is performed by a temporally bounded subject; it affects a temporally bounded object. Accomplishments and achievements in English (in past or perfect tense) refer to perfective actions. One thing to note here is that in English the verbs are unmarked for 'temporal' boundedness, and possess only a semantic feature of 'change', i.e., transition from one state to another, as the verbs 'ate' and 'ironed' in (41) illustrate.

- (41) a. The child ate the apple.
 b. The girl ironed the skirt.

On the other hand, definite and indefinite articles in English are used to signify temporally bounded (i.e., perfective) situations. For example, temporal boundedness in sentences like (41) is marked by the article upon the objects, even though the verbs are unmarked for perfectivity. In consequence of this fact, Kabakciev (1984) holds that the major function of the regular patterns of the definite and indefinite articles in languages like English, along with the expression of definiteness and indefiniteness (in the strict sense, specificity and non-specificity), is the explication of temporal boundedness of objects and hence the explication of perfective actions. This interpretation given by Kabakciev of the use of articles in English to signify temporal boundedness of objects not only throws light on the question of why accomplishments and achievements, when in past or perfective tense, are necessarily interpreted as having attained the goal, but also provides support for the claim suggested here that English is a vecto-

rial verb language. And more importantly, he has offered an indirect answer as to why accomplishments and achievements in English, for the most part, are syntactically formed. In other words, the articulated noun phrase serves to indicate the temporal boundedness of an event. More exactly, it indicates that an event has reached its boundary. A bounded sentence is here defined as the one that represents a situation as terminating, whereas an unbounded sentence is here defined as the one that does not represent a situation as terminating.[10]

As opposed to their counterparts in English, verbs in Chinese are marked for temporal boundedness (i.e., perfectivity) of events, whereas objects are unmarked in that articles are nonexistent in Chinese. This semantic distinction between Chinese and English can be seen if we contrast the sentences in (41) with their Chinese counterparts in (42).

- (42) a. Xiao haizi ba pingguo chi-(diao) le₁
 small child BA apple eat-(away) le₁
 'The child ate the apple.' (= 41a)
- b. nei-ge nühaizi ba qunzi tang-hao le₁
 that-cl. girl BA skirt iron-ready le₁
 'The girl ironed the skirt.' (= 41b)

The Chinese sentence in (42) are 'temporally' bounded (i.e., perfective) events. As we see, the difference between the English accomplishment sentences in (41) and their Chinese counterparts in (42) lies in the fact that the latter, but not the former, resort to resultative verb compounds - 'chi-(diao)' ('eat-away') and 'tang-hao' ('iron-ready') - in indicating temporal boundedness, i.e., the completion of an event.

An essential point to note here is that the BA-construction in Chinese is connected with a temporally bounded situation. The function of the marker 'BA' can be said to indicate the temporal 'boundedness' of the object. Thus, the objects in (42) - 'pingguo' ('apple') and 'qunzi' ('skirt') - have a 'specific' reference, which, in turn, can be con-

ceived of as temporally bounded objects. This fact lends support to the claim suggested here that Chinese is a scalarial-verb language. The semantic issues involved in the BA-construction will be further dealt with in Chapter 6.

As we have mentioned in the previous section, Tai (1984) has attempted to account for the aspectual difference between accomplishments in English and resultative verb compounds in Chinese. After comparing the structure involved in these two types of constructions, he claims that Chinese does not have the category of accomplishment verbs in that while an accomplishment verb in English has both action and result aspects, a resultative verb compound in Chinese has only the result aspect. One piece of evidence adduced by Tai in support of his claim lies in the fact that while accomplishment verbs in English can occur in the progressive (just like an activity verb), a resultative verb compound in Chinese cannot, despite the fact that the first element of the compound refers to an activity. For example, all the accomplishment sentences in (39) can occur in the progressive, as shown in (43); however, the resultative verb compounds in (40) cannot, as shown in (44).

- (43) a. He was writing a letter.
 b. John was walking five miles.
- (44) a. *Ta zai xie-wan yi-feng xin
 he zai write-finish one-cl. letter
- b. *Wo zai zhao-zhao wo de shu
 I zai look for-reach my book
- c. *John zai zou-wan wu li lu
 John zai walk-finish five mile distance

This observation made by Tai (1984), at first glance, seems to be correct; yet, upon closer scrutiny, the evidence presented by him cannot serve to differentiate resultative verb compounds in Chinese from accomplishments in English because it is based on a wrong assumption. In the first place, Tai equates the progressive form in English with

the so-called progressive (i.e., the *zai*-construction) in Chinese. So far as I can see, it is a mistake on Tai's (1984) part to treat the progressive in English and the one in Chinese as the same. Secondly, resultative verb compounds in Chinese, as opposed to accomplishments in English, are lexically derived, and thus should be treated as a 'single' unit rather than as being composed of two separate, loosely-knit lexical items. The whole unit, therefore, refers to the 'resultative' state of a situation denoted by an action (or activity), but not to an action as such.

The basic function of the English progressive, according to Edgren (1985), is to mark an action as going-on, with an added feature of non-stativity. One fundamental difference between the progressive in English and the one (i.e., the *zai*-construction) in Chinese consists in the fact that the former denotes 'temporariness', whereas the latter does not. The Chinese progressive, in its turn, has a connotation of 'locality', which is not part of the meaning of the English progressive. '*Zai*', which means 'in the process of', to a great extent, implies the 'location' of activities, and thus is not compatible with states nor temporariness of actions. Hence, the absence of the semantic notion of 'temporariness' in the Chinese progressive accounts for the fact that resultative verb compounds cannot occur in the progressive.[11] The 'temporariness' referred to in the English progressive, on the other hand, explains the reason why accomplishments in English, when in the past or perfect tense, can occur in the progressive. Note that the past progressive form in (43) does not refer to the action as going-on, which is the basic function of the progressive in English; on the contrary, this use of the progressive in English can be interpreted as a grammatical means of 'atelicizing' a situation. That is, it converts a 'bounded' situation into an 'unbounded' one. As we noted above, accomplishments in English, when in the past or perfect tense, denote a bounded situation, viz, an end-point has been reached. And this is achieved through the use of articles in English which mark the temporal boundedness of the object; verbs in Eng-

lish, however, are unmarked for 'boundedness'. But, this 'bounded' situation in English can be 'atelicized' through grammatical means by virtue of its syntactic composition and its 'directed' verb content. The progressive form is one of the grammatical means in English for converting a 'bounded' situation into an 'unbounded' one, namely, an activity.[12] In a sense, what the progressive does is to prevent the action from reaching the goal, i.e., the end-point achievement. More exactly, the action is presented 'analytically' ('from within'), as mentioned above. After the application of the progressive, the verb is marked for unboundedness; on the other hand, the object's preliminary boundedness, being marked by the article, is eliminated. All the sentences in (43) indicate this function of the progressive, namely, that an accomplishment has been converted into an activity. What Tai (1984) has presented as evidence in support of his claim actually refers to this function of the English progressive. Inasmuch as he failed to grasp this fact, he wrongly used it as a criterion in differentiating accomplishments in English from resultative verb compounds in Chinese.

In spite of the fact that resultative verb compounds also refer to a 'bounded' event, they cannot be 'atelicized' grammatically by resort to the progressive in Chinese in that such a function as that of the progressive in English, as mentioned, is non-existent in Chinese. As we have just noted, verbs in Chinese are marked for 'boundedness' of event, and resultative verb compounds in Chinese are lexically derived. Because of this fact, the only way to transform a 'bounded' situation (denoted by a resultative verb compound) into an 'unbounded' situation, namely, an activity, is to have the 'result' part eliminated from the verb compound. Thus, the unacceptable examples in (44) will be rendered acceptable in (45):

- (45) a. Ta (zai) xie - (yi-feng) xin
 he (zai) write (one-cl.) letter
 'He was writing a letter.'
- b. Wo (zai) zhao- (wo de) shu
 I (zai) look for (I Poss) book
 'I am looking for my book.'
- c. John (zai) zou- (wu li) lu
 John (zai) walk (five mile) distance
 'John was walking (five miles).'

It is to be noted that verb-object compounds in Chinese are often used to refer to activities. For example, 'xie-xin' ('write-letter') and 'zou-lu' ('walk-distance') in (45) are verb-object compounds in Chinese. As opposed to resultative verb compounds, verb-object compounds refer to an 'atelic' situation; but, like resultative verb compounds, they also consist of two parts, i.e., an action and an object. A more detailed treatment of the semantic issues involved in verb-object compounds will be given in Chapter 4.

Tai (1984), on the other hand, has misinterpreted the internal structure of the resultative verb compounds in Chinese. He claims that the resultative verb compound in Chinese has only the result aspect, (despite the fact that the first element denotes an activity). For Tai (1984), the first part of the resultative verb compound - the action verb - plays no role at all in its aspectual interpretation and only the second part - the result - is the main focus of the compound. This analysis of the internal structure of resultative verb compounds in Chinese, in my view, is somewhat misleading. In fact, resultative verb compounds are far from being a homogeneous group. They can, however, be roughly divided into two subgroups: 'lexicalized' and 'grammaticalized' resultative verb compounds. 'Lexicalized' resultative verb compounds such as e.g., 'ti-si' ('kick-die'), 'da-po' ('hit-break'), are composed of two 'lexical' verbs. It is important to note that the second verb of the compound behaves, to a great extent, like an independent verb and thus retains its own lexical meaning. In addition, the meaning of the

second verb is brought into prominence, being interpreted as the result of the action. In view of this fact, Teng (1975), as discussed in Section 3.2.1.1, goes as far as to treat this type of verb compounds as being derived from the second verb, with the first verb being treated as a 'causative' marker incorporated into the second verb.

'Grammaticalized' resultative verb compounds such as 'xie-wan' ('write-finish') and 'zhao-dao' ('look for-reach'), differ slightly from 'lexicalized' resultative verb compounds as to the status of the second verb of the compound, which, to a great extent, has been relegated to the status of a 'grammatical' marker. For example, the second element 'wan' ('finish') in 'xie-wan' (write-finish) and 'zou-wan' ('walk-finish') can be conceived of as being suffixed to the first verb, functioning as a marker of 'telic' aktionsart in the sense that it affects the intrinsic temporal nature (i.e., aktionsart) of a situation (denoted by the first verb) and hence changes its 'aktionsart' from an 'atelic' (i.e., unbounded) situation to a 'telic' (i.e., bounded) situation. As an illustration, the marker 'wan' in 'xie-wan' ('write-finish') refers to 'thorough completion' (or 'termination') of an action or event.

Given this semantic distinction of resultative verb compounds in Chinese, Tai's (1984) claim that the resultative verb compound has only the result aspect is too vague to cover the class of resultative verb compounds in Chinese. The semantic issues involved in this type of verb compounds in Chinese will be studied in detail in Chapter 5.

3.2.3 Two-System Classification of Verbs in Chinese

Having examined the semantic differences between English and Chinese verbs, we turn now to the aspectual classification of verbs in Chinese - the main topic of this chapter. Here, we are confronted with the following question: Does Vendler's (1967)

four-fold classification of verbs suffice to account for the aspectual characteristics of Chinese verbs? It is essential to note here that Vendler's classification of verbs is based mainly on the semantic characteristics of English verbs.

As we have shown in the last section, basic to Vendler's classification of English verbs is the notion of 'length of time'. In other words, the definitions of his four classes of verbs revolve around a distinction of length of time required for one class of verbs over against the other. For example, the aspectual distinction between accomplishments and achievements in English resides in the fact that the former involve 'period of time', whereas the latter involve 'point of time'. As we noted above, the notion of 'length of time' seems to conform with the 'vectorial' character of the English verb, which shows a 'directed' verb content. By contrast, Chinese falls into the category of 'scalarial-verb' languages, and hence verbs in Chinese possess a 'non-directed' verb content. As a result of this semantic distinction in verb content, various syntactic and aspectual differences occur between English and Chinese sentences. For example, in English, an event referred to in a sentence is conceived of as 'progressing' in a direction, i.e., from one stage to another (in a time sphere), whereas in Chinese, an event is construed as being confined in a time sphere. That is, it is treated as a 'self-enclosed' unit of happening, which can be viewed as a whole in its entirety or as condensed. In a sense, what verbs in Chinese possess is 'extent' but not 'direction'. Highly illustrative of this difference is the fact that resultative verb compounds in Chinese, which are lexically derived, are resorted to to express both accomplishments and achievements in English. Viewed in this way, the notion of length of time underlying Vendler's classification, which accords well with the 'vectorial' character of English verbs, does not seem to accord well with the 'scalarial' character of Chinese verbs. As a consequence, Vendler's scheme will encounter difficulty when it comes to the classification of verbs in Chinese.

In Section 3.2.1.2, I have discussed briefly Tai's (1984) description of Chinese verbs in terms of Vendler's four categories. Tai (1984) claims that Chinese exhibits three categories of verbs pertaining to the notion of time, viz., states, activities and results. The time schemata for states and activities are no different from those in English. The time schema for results is such that it has a definite time instant which corresponds to the ending point of the event from the point of view of the result rather than the action.[13]

The above observations made by Tai (1984) are generally correct. However, his three categories - states, activities, and results - still cannot account for the aspectual characteristics of verbs in Chinese. This arises largely from the fact that his classification is only a modified version of Vendler's (1967) scheme, in which the classes of accomplishments and achievements have been replaced by the class of 'results'.

In the first place, Tai (1984) fails to recognise the fact that the assumption underlying Vendler's classification of verbs is not the notion of time but that of length of time, which fits the 'directed' verb content of the English verb. Tai (1984) did not notice this difference, and thus treated verbs in Chinese on a par with those in English. As a consequence of this misinterpretation, the aspectual characteristics of Chinese verbs are obscured rather than exposed. For example, Tai attempts to account for the internal aspectual difference between accomplishments (and achievements) in English and resultative verb compounds in Chinese. He claims that while accomplishments can occur in the progressive, resultative verb compounds cannot. However, as we have shown in the previous section, this evidence used by Tai (1984) does not suffice to explicate the aspectual distinction between English and Chinese in that it is based on a wrong assumption. In actual fact, the aspectual difference between English and Chinese results from the fact that they have different verb content. This distinction in

verb content plays a significant role in the aspectual classification of verbs in both English and Chinese.

In the second place, Tai's (1984) interpretation of the resultative verb compounds in Chinese is quite misleading, and hence fails to clarify the semantic characteristics of the compounds. He claims that a resultative verb compound in Chinese has only the 'result' aspect but does not have the 'action' aspect. A resultative verb compound, according to Tai (1984), consists of two parts, the first indicating a 'presupposed' activity, and the second an 'asserted' result. Here, the difficulty with Tai's (1984) definition lies in his invoking of the vague notion of 'presupposition' in the interpretation of the first part of the compound, which, it seems to me, refers to an activity, but not necessarily a 'presupposed' activity. As a result, his definition cannot explain the internal aspectual properties involved in the following examples:

- (46) a. Wo ba wo de shu zhao-zhao le₁
 I BA I Poss. book look for-obtain le₁
 'I found my book.'
- b. Wo ba baozi kan-wan le₁
 I BA newspaper see-finish le₁
 'I finished reading the newspaper.'
- c. Ta tou-zou le₁ wo de zhaoxiangji
 he steal-run le₁ I Poss. camera
 'He walked off with my camera.'

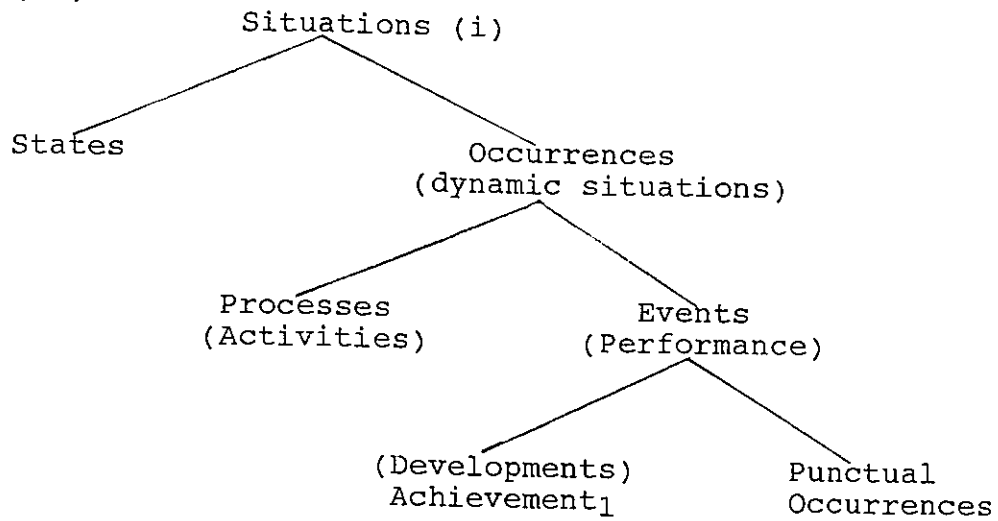
The resultative verb compounds in (46), viz., 'zhao-zhao' ('look for-obtain'), 'kan-wan' ('see-finish'), and 'tou-zou' ('steal-run'), do not refer to a 'presupposed action - asserted result' sequence. The second part of these compounds does not denote the 'asserted' result as it is interpreted according to Tai's definition. Rather, it has been more or less relegated to the status of 'grammatical' markers, being suffixed to the first verb, and functions as a marker of 'telic' aktionsart, adding the notion of an endpoint to the event (denoted by the first verb), as mentioned in the last section. (This type of verb particles will be dealt with in chapter 5.)

Finally, the bulk of state verbs in Chinese will present problems to Tai's classification in that they may be converted into achievements (i.e., resultative), as shown in (47) and (48):

- (47) a. John hen ai Mary
 John very love Mary
 'John loves Mary very much.'
- b. John ai-shang le₁ Mary
 John love-go up le₁ Mary
 'John fell in love with Mary.'
- (48) a. Ta hen gao
 he very tall
 'He is very tall.'
- b. Ta gao le₁ liangcun
 he grow le₁ two inches
 'He grew/has grown two inches (taller).'

In light of the above inadequacies, Tai's classification of verbs in Chinese based on Vendler's assumption fails to provide a satisfactory account of the aspectual characteristics of verbs in Chinese. Consequently, Vendler's system has to be reconsidered in order to make use of the notions in his system for the classification of verbs in Chinese. As I see it, a single system of classification cannot provide an adequate characterization of the aspectual properties of verbs in Chinese. In this chapter I put forward a two-system aspectual classification of verbs, and more accurately, sentences in Chinese in terms of the notion of 'change' of situation, which includes: i) a classification of second-order entities (situations), and ii) a classification of temporal changes of second-order entities (situations), as illustrated below:[14]

(49)

Examples

States: gao 'tall' pang 'fat'
 ai 'love' hen 'hate'

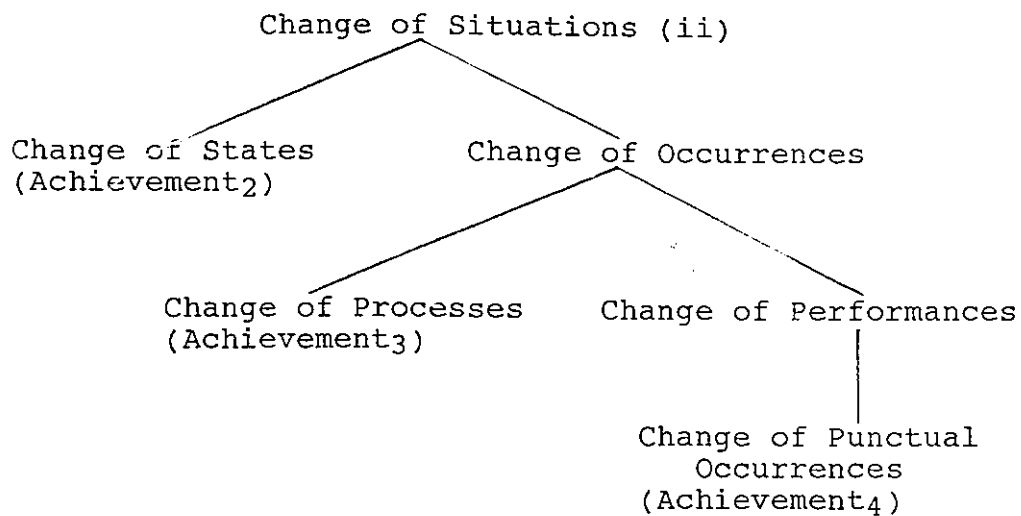
Process: xue 'study' xi 'wash'
 chi 'eat' sha 'kill'
 zhao 'look for' da 'hit'

Developments (Achievement₁):

da-si 'hit-die'
 ti-shang 'kick-injured'
 da-po 'hit-break'
 sha-si 'kill-die'

Punctual Occurrences: si 'die' diao 'fall'
 diu 'lose' tao 'escape'
 po 'break' zou 'leave'

(50)

ExamplesChange of States (Achievement₂):

hen-tou 'hate-through' ('hate (sb's) guts')

ren-chu 'identify-come out' ('recognize')

xiang-qi 'think-emerge' ('think out')

ai-shang 'love-move up' ('fall in love')

Change of processes (Achievement₃):

chi-wan 'eat-finish'

xue-hao 'study-complete'

zhao-dao 'look for-reach'

Change of Punctual Occurrences:
(Achievement₄)

si-diao 'die-depart'

diu-diao 'lose-fall'

zou-diao 'leave-depart'

Several points bearing on the aspectual classification presented here require further clarification.

Firstly, a few remarks have to be made concerning the notion of 'change' used here in the explication of the situation involved in a sentence. As pointed out in Section 3.2.2, verbs in Chinese are 'non-directed', as far as verb content is concerned. In light of this semantic character, an event (denoted by a verb) in Chinese is presented as a 'self-enclosed' unit of happening, which can be viewed as a whole in its entirety or as condensed. In other words, an event in Chinese is presented as being phased, i.e., referring to one phase or another. And the notion of 'change' can only be construed as referring to a 'focused' phase, which is connected with another phase. This interpretation of the notion of 'change' plays a pivotal role in the explication of 'situation' and 'change of situation' with regard to the classification of verbs proposed here.

Secondly, in this chapter I attempt to draw a distinction between 'activity' and 'process', the former indicating action in general, but the latter referring to a temporal property. Thus, process verbs do, but activity verbs do not, bear on the aspectual classification of situations. This aspect is clearly demonstrated by the resultative verb compounds such as, e.g. 'chi-wan' ('eat-finish'), 'zhao-dao' ('look for-reach'), and 'xue-hui' ('study-know'), which refer to 'change of process' rather than 'change of activity', as shown above. The bulk of activity verbs, however, are also verb compounds, namely, verb-object compounds. Therefore, process and activity verbs in Chinese, to a certain extent, are intimately bound up with one another. The semantic issues involved in activity verb compounds will be the topic of the next chapter.

The third point concerns the resultative verb compounds in Chinese. Recall that in the previous section I have divided this type of compounds roughly into two groups - 'lexicalized' vs 'grammaticized' resultative verb compounds. The essential criterion

drawn upon to distinguish the two resides in the fact that the second element of 'lexicalized' resultative verb compounds retains its own 'lexical' meaning, and furthermore, the meaning is brought to the fore in the aspectual interpretation of the compound. By contrast, the second element of 'grammaticalized' resultative verb compounds has been relegated to the status of 'aktionsart' markers. This semantic distinction between these two groups of resultative verb compounds has never been clearly explained by Chinese linguists. Instead, these two groups are always lumped together in their analyses (e.g., Tai, 1984). Within the classification of verbs suggested here, 'Lexicalized' resultative verb compounds fall within the domain of Developments, referring to a transitive change of state in the sense that a resultant event arises from the performance of the action expressed by the action verb. 'Grammaticalized' resultative verb compounds signify 'change of states/processes', and thus are regrouped under the rubric of 'change of situations'. These two groups of resultative verb compounds will be dealt with in detail in Chapter 5.

Finally, a distinction is drawn between 'Developments' and 'Punctual occurrences' with regard to 'events' in the classification presented above. Despite the fact that they can both be classed as 'achievements', in Vendler's terminology, 'Developments' differ from 'Punctual occurrences' in that they involve two 'consecutive' phases (in an event) in which the end-point achievement is explicitly articulated. Represented in this category are 'lexical' resultative verb compounds such as, e.g., 'da-si' ('hit-die'), 'ti-shang' ('kick-injure'), etc. On the other hand, 'Punctual occurrences' indicate 'change of state'. Represented in this category are verbs like 'si' ('die'), 'po' ('break'). However, when these verbs combine with the verb particle 'diao', which means 'sever, depart', they are converted into an achievement in the sense that the notion of an endpoint is explicitly added to an event, as illustrated in (51) and (52) respectively (See Chapter 5 for a detailed discussion of verb particles in Chinese):

- (51) a. Pingzi po le₁
 bottle break le₁
 'The bottle broke.'
- b. Chezi huai le₁
 car break le₁
 'The car stopped working.'
- (52) a. Pingzi po-diao le₁
 bottle break-away le₁
 'The bottle is broken.'
- b. Chezi huai-diao le₁
 car break-away le₁
 'The car broke down.'

3.3 Conclusion

By way of conclusion, I will present a contrast of the aspectual differences involved in 'to kill' in English with its near equivalent, namely, 'sha-si' ('kill-die') in Chinese. In Dowty (1979), 'kill' is classed as an accomplishment, denoting transitive change of state. 'Kill', on the other hand, has always been equated with 'sha' or 'sha-si' in Chinese. But, as Tai (1984) and Tai & Chou (1976) argued, 'sha' and 'sha-si' in Chinese do not correspond totally to 'to kill' in English in that while 'sha', which is an action verb, behaves exactly like 'da' ('hit'), 'sha-si' ('kill-die') is a resultative verb compound, with 'sha' indicating the action the actor performs and 'si' denoting the result of the recipient after the action. Their differences are brought out by the examples in (53) taken from Tai (1984:291):

- (53) a. Zhangsan sha le₁ Lisi liangci, Lisi
 Zhangsan kill le₁ Lisi two times
 dou meiyou si.
 also NEG die
 'Zhangsan performed the action of attempting to kill Lisi, but Lisi didn't die.'
- b. *Zhangsan sha-si le₁ Lisi liangci, Lisi
 Zhangsan kill-die le₁ Lisi two times Lisi
 dou meiyou si
 also not die

Sentence (54), which involves the English 'to kill', on the other hand, implies the death of Peter, and thus this fact cannot be negated.

(54) *John killed Peter but he (i.e., Peter) didn't die.

Hollosoy (1984), on the other hand, argues against Dowty's treatment of 'to kill' in English, and contends that despite the presence of an object complement with 'kill', this verb refers to achievement rather than accomplishment predication. She has adduced two pieces of evidence to substantiate her argument: a) 'Kill' cannot take an 'in-phrase', which is used to identify 'accomplishments';[15] b) 'Kill' cannot occur in the progressive. The examples in (55) are taken from Hollosy (1984), illustrating the above characteristic features of 'kill':

- (55) a. Bruce killed James.
 b. *Bruce killed James in ten minutes.
 c. *Bruce was killing James.
 d. Bruce killed James (in an instant).

In light of the evidence presented by Hollosy (1984) with regard to 'kill' in English, we can claim that both 'kill' in English and 'sha-si' ('kill-die') in Chinese refer to 'achievements'. And their difference lies in the fact that 'sha-si' in Chinese is a resultative verb compound, with both activity and end-point achievement being explicitly expressed, whereas 'kill' in English refers to the end-point of an event, with the action left unspecified. This aspectual distinction has to do with the semantic difference between English and Chinese verbs, as discussed in the previous section. That is, English is a vectorial-verb language, whereas Chinese is a scalarial-verb language. This fact lends further support to the claim made in this chapter that the verbal content of a language bears on the aspectual classification of verbs (in that language). In the classification suggested here, 'sha' is classed as an activity verb, whereas 'sha-si' is grouped as an achievement, which falls into the category of 'Developments'.

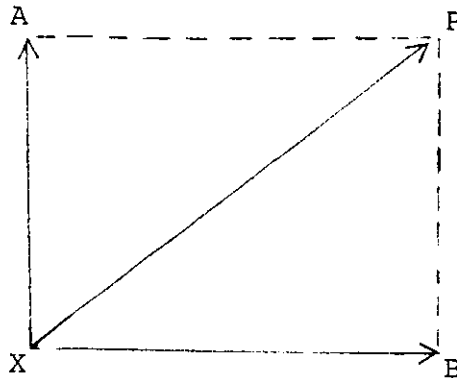
Footnotes to Chapter III

- [1] Hollosy (1983) calls attention to the fact that achievements in English are far from being a homogeneous group. Furthermore, there exists an ambiguity in the interpretation of some achievement sentences. For example, sentence (1)
- (1) John found the book in an hour.
- has two interpretations: in different contexts, 'in an hour' is interpreted either as i) measuring the time that elapsed during John's looking for the book up to the successful outcome or as ii) indicating a definite point in time anticipated from a previous point where the actual 'finding' took place in a moment, not preceded by the process of his consciously trying to find the book.
- [2] Gabbay & Moravcsik (1979:61) remark that Vendler's (1967) and Kenny's (1963) classification of verbs into categories like 'performance' or 'achievement' is meant to serve as the foundation of a theory of action rather than as a basis of a formal representation of tense and aspect. They further add that the semantic differences that are crucial for a theory of action are not always the same ones needed for the interpretation of tense and aspect. Their remark, to a great extent, is correct. Yet, it provides further support for the claim that Vendler's classification should not be interpreted as a characterization of verbs as such but rather of sentences from a standpoint of 'aktionsarten'.
- [3] Teng (1975:27) asserts that he does not want to "go into currently controversial issue of whether the derivation should be 'lexical' or 'transformational' as proposed in McCawley (1968)".
- [4] Teng (1975:52) claims that "although both states and process specify Patient, the characteristics defined by them are different, the former specifying what state a Patient is in, and the latter what state a Patient enters".
- [5] In Vendler (1967), achievements are distinguished from accomplishments on the

following grounds: For example, if 'you read a book in five hours' (an accomplishment), then it follows that 'you read a book for those five hours'; but if 'you reached the summit in two hours' (an achievement), it does not follow that 'you reached the summit for those two hours' - what you did for those two hours consisted in some unspecified activities. In other words, achievements refer to instantaneous events. The criterion used by Vendler in distinguishing accomplishments from achievements is 'period' of time versus 'point' of time.

- [6] The Random House College Dictionary defines 'vector' as "a quantity possessing both magnitude and direction". 'Vector' can be represented by an arrow the direction of which indicates the direction of the quantity and the length of which is propositional to the magnitude, as shown in diagram (1). 'Scalar', on the other hand, is defined as "a quantity possessing only magnitude".

(1)



XA, XB : Vector
XP: Resultant

- [7] For a detailed list of the syntactic and semantic tests for English verbs, see Dowty (1979:60).
- [8] Smith (1983) groups achievements, activities, and accomplishments into one class, all of which are said to involve 'change of state', and calls them 'events'. The important distinction among events, according to Smith (1983), turns on their inter-

nal structure. Achievements and accomplishments have different stages, from beginning to completion. That is, they are events with natural endpoints, because beginnings and endings are intrinsic to the events. Activities, on the other hand, are homogeneous. That is, their stages do not differ, and they begin or end arbitrarily, at any stage. States are treated by Smith (1983) as situations that involve no change. Hence, the endpoints of a state cannot be part of the state itself because beginnings and endings involve change of state.

[9] Dahl (1985) keeps the distinction between 'aktionsart' and 'aspect'. While the former pertains to the lexicon, the latter pertains to the grammar. Any derivationally expressed category, according to Dahl, would have to be lexical rather than grammatical.

[10] This definition is taken from Declerck (1979). A more formal definition of the notion of 'boundedness' is given by her as follows (1979:766):

A linguistic proposition P describing a situation S is bounded (i.e., represents S as bounded) if a) S proceeds along the time axis between an initial point t_j and a terminal point t_j ; and b) S cannot be described in terms of P as long as t_j has not been actualized.

If P does not represent S as involving t_j , it is unbounded.

[11] See Chapter 2 for more details.

[12] There are other grammatical means which are used in English in converting a 'bounded' situation into an 'unbounded' one, such as the use of 'quantified' noun phrases and adverbials (cf. Dowty, 1979).

[13] Tai (1984) attempts to make a typological distinction between languages in terms of the ending point of an event. He claims that English is an Agent-oriented language, whereas Chinese is a Patient-oriented language. Accomplishments and achievements in English, according to Tai, involve a unique time point corresponding to the ending point of an event. This ending point allows a language to view it either from the beginning of an event or from the ending. He further states:

"As an Agent-oriented language, English looks at the ending point from the viewpoint of an agent and thus allows action verbs to have implicational structures. By contrast, as a Patient-oriented language, Chinese looks at the ending point from the viewpoint of an affected patient and therefore its action verbs do not exhibit implicational structures. Instead, it allows the action part of a resultative verb compound to be presupposed and the result part to be asserted" (1984:295).

So far as I can see, this interpretation of the difference between English and Chinese presented by Tai (1984) is misleading. The semantic difference between English and Chinese lies not so much in the fact that the former is an Agent-oriented language, whereas the latter is a Patient-oriented language, as in the fact that English is a 'vectorial-verb' language, whereas Chinese is a 'scalarial-verb' language, as proposed in this chapter. And the so-called implicational structures involved in action verbs in English derive from its 'directed' verb content.

- [14] The term 'second-order entities' is defined in Lyons (1977:442-43) as referring to "events, processes, states-of-affairs, etc., which are located in time and which are said to occur or take place, rather than to exist". First-order entities, on the other hand, refer to 'physical objects'.

Hollosy (1984) has also attempted a two-system aspectual classification of English verb phrases. The classification of Chinese verbs presented here, to a certain extent, incorporates Mourelatos'(1981) scheme and Hollosy's (1984) classification, except that here the semantic character of Chinese verbs is taken into consideration in our classification.

- [15] Hollosy (1984:93) points out that the 'In-phrases' do not identify all achievements in English, contrary to what is generally held by other linguists (e.g., Dowty 1979). It is only 'achievements' expressing change of process that can be modified by an 'In-phrase'. And this is born out by the examples in (1):

(1) a. Sally found the pot in two minutes.
 (= in two minutes' time)

- b. Sally found the pot in two minutes.
(= it took her two minutes to find it.)

(1a) represents a change of state rather than a change of process. Thus the 'In-phrase' in (1b) does not apply there.

Chapter IV

VERB-OBJECT COMPOUND CONSTRUCTIONS IN CHINESE

4.1 The Internal Structure of Verb-Object Compounds

4.1.1 Defining Characteristics

In this chapter I will look at the semantic issues involved in the verb-object (hereafter V+O) compound constructions. Among the aspectual classification of verbs put forward in Chapter 3, this type of verb compounds has not been directly dealt with. This is partly due to the fact that the notion of process (which refers to temporal properties) rather than that of action has been drawn upon as a criterion for the classification of situations. It is also partly due to the fact that V+O compounds, just like resultative verb compounds, are considered to be lexically derived. V+O compounds refer to 'activities'.

From a structural point of view, verb-object compounds in Chinese are composed of two parts, i.e., action and object, having a syntactic relation of a verb and its direct object. To set the context for discussion, consider the following examples in (1) and (2):

- (1) zhao-xiang 'take-picture' ('to photograph')
 kai-che 'operate-car' ('to drive')
 tiao-wu 'jump-dance' ('to dance')
 da-qiu 'hit-ball' ('to play')
- (2) chang-ge 'sing-song' ('to sing')
 kan-shu 'look at-book' ('to read')
 chi-fan 'eat-rice' ('to eat')
 xie-zi 'write-character' ('to write')

It is to be noted here that the V+O compounds in Chinese do not constitute a homogeneous group. For instance, the examples in (2) differ slightly from those in (1). This group of V+O compounds in (2) corresponds to the class of so-called object-deletion verbs in English, as can be seen from their English counterparts in the glosses. Nevertheless, the defining characteristics of V+O compounds in Chinese as a whole can be represented as follows: the verb belongs to the category of action (or process) verbs, and the object is phonetically unstressed and semantically non-referential.[1] Moreover, the 'object' of the compound is generally construed as being incorporated into the verb, and together they form a single unit. In view of this fact, the internal structure of V+O compounds can be claimed to be of a 'compositional' nature in the sense that the semantic features of each constituent combine together and form the meaning of the whole unit. Highly illustrative of this analytical nature are the examples in (1). For instance, 'kai-che' ('to drive') consists of two parts, i.e., the verb 'kai' ('operate') and the object 'che' ('car') and the meaning of the compound is built up from its component parts. An important thing to notice about this type of V+O compounds is that the verb of the compound, to a great extent, has been relegated to the status of referring only to the performance of the action denoted by the verb itself. The compositional nature is such that the interplay of verbal and nominal features has certain effects on the interpretation of the inherent temporal properties of the compound as a whole.

As discussed in Chapter 3, Chinese has been characterized as a scalarial-verb language, and thus verbs in Chinese possess a 'non-directed' verbal content. The consequence of this is that the temporal 'boundedness' of an event is explicitly indicated, as evidenced by the resultative verb compounds in which the end-point achievement (of an event) is overtly articulated. (See Chapter 3 and Chapter 5 for more details.) As I see it, the incorporation of the object into the verb also relates to the 'non-directed' verb content of Chinese verbs. Note that V+O compounds refer to activities; however, the action involved in the compound is to be interpreted as 'extending over' rather than as 'progressing into' different stages of an event (in a time sphere), as is the case of English verbs, though the stages may be conceived of as being homogeneous in nature. Viewed from this angle, the incorporation of the object (of the compound) into the verb, which indicates the performance of an action, serves to fix the limit of an event over which the action may extend. V+O compounds, for the most part, indicate an 'atelic' verb content.

At this point, a problem arises. How can we distinguish an 'incorporated' object from a 'non-incorporated' one in syntactic structure? First, consider the sentences in (3) and (4):

- (3) a. Mary tiantian chang-ge
 Mary every day sing-song
 'Mary sings every day.'
- b. Mary zai chang-ge
 Mary zai sing-song
 'Mary is singing (now).'
- c. Mary chang le₁ ge le₂
 Mary sing le₁ song le₂
 'Mary has sung.'
- d. Mary chang le₁ yi-shou ge
 Mary sing le₁ one-cl. song
 'Mary sang/has sung a song.'
- e. Mary ba ge chang-wan le₁
 Mary BA song sing-finish le₁
 'Mary has sung a song.'

- (4) a. John qu qi-ma
 John go ride-horse
 (Lit.) 'John goes to do some horse-riding.'
- b. John zhengzai qi-ma
 John now ride-horse
 'John is riding (a horse) now./John is doing
 some horse-riding now.'
- c. John zaoshang qi le₁ ma le₂
 John morning ride le₁ horse le₂
 (Lit.) 'John did some horse-riding this
 morning.'
- d. John qi le₁ yi-pi lao ma chu-qu
 John ride le₁ one-cl. old horse go-leave
 (Lit.) 'John left by riding an old horse.'
- e. John ba ma qi huilai le₁
 John BA horse ride back le₁
 'John rode the horse back.'

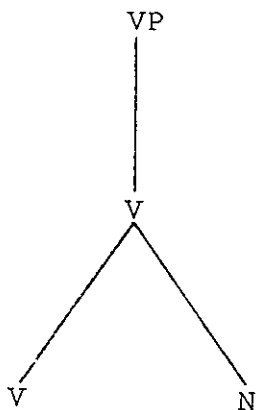
In light of their aspectual differences, the examples in (3) and (4), for the most part, can be divided into two groups: The (a-c) sentences of (3) and (4) refer to an 'unbounded' situation, i.e., an activity, whereas the (d-e) sentences of (3) and (4) denote a 'bounded' situation. A 'bounded' sentence can be defined as the one that represents a situation as terminating, whereas an 'unbounded' sentence can be defined as the one that does not represent a situation as terminating (cf. Declerck, 1979).

The (c) sentences in (3) and (4), on the other hand, require further clarification, in that they occur with the perfective aspect marker *le₁*. Here, we have a case in which some limited period of time (though of indefinite duration) is implied, but not an habitual activity.[2] Thus, in (3c) and (4c), a past activity (of some limited period of time that is implied) is indicated, viz., 'Mary did some singing' and 'John did some horse-riding this morning'.[3]

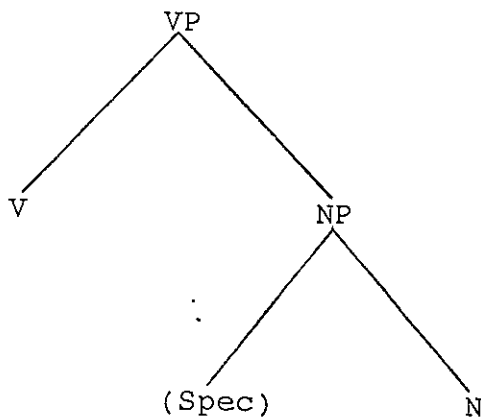
Syntactically, what differentiates the sentences in (3) and (4) referring to an 'unbounded' situation, i.e., an activity, from those in (3) and (4) representing a 'bounded'

situation, namely, an event, lies in the fact that the former involve a verb-object compound which has the internal structure of V+N, whereas the latter contain a verb phrase which has the internal structure of V+NP, i.e., a verb and its complement. In this chapter I attempt to draw a distinction between the V+O (i.e., V+N) compound, and the V+NP (i.e., verb + complement) phrase, the former having the structure as in (5), while the latter having the structure as in (6):

(5)

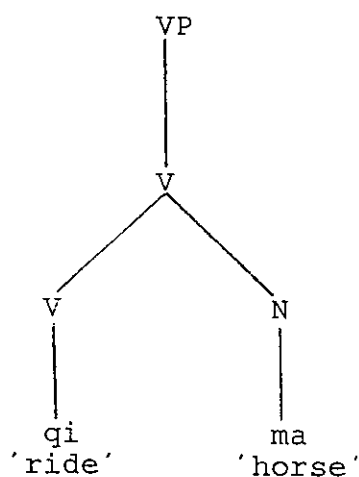


(6)

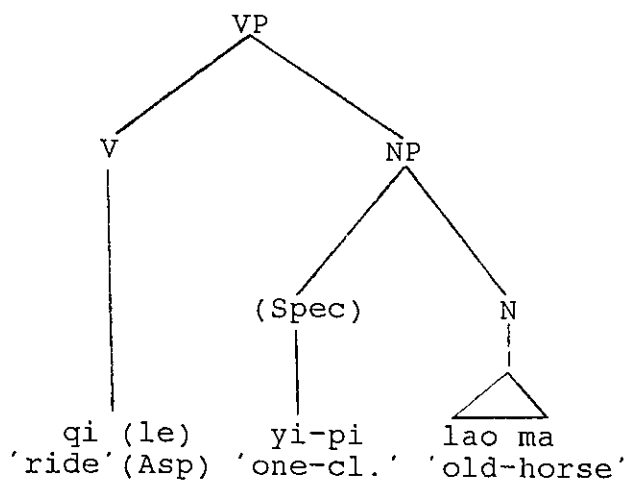


As an illustration, the V+O compound 'qi-ma' ('ride-horse') in (4b) will have the syntactic structure of V+N as in (7), whereas the verb and its complement phrase 'qi le₁ yi-pi lao ma' ('rode an old horse') in (4d) will have the syntactic structure of V+NP as in (8).

(7)



(8)



As we mentioned earlier, the incorporated object of the V+O compound has been characterized as semantically 'non-referential'. This point requires further explanation. To begin with, a distinction has to be made between the notion of 'definiteness' and that of 'referentiality' (or 'specificity'): The notion of 'definiteness' is a semantic feature defined independently of context, although its satisfaction is often contingent on a (specific) context (cf. Reed, 1982). In most cases, 'definiteness' is created by the use of a particular determiner. The notion of 'specificity' is totally dependent on context, which may be determined by syntactic means or by pragmatic features (the aspectual context

of a sentence being one of them). The notion of 'referentiality', in turn, rests on that of 'countability' (or 'individuation') of nouns. Allan (1980) has observed that the notion of 'countability' is imputed to the NP rather than to the N. That is to say, the noun in its bare form is neutral with regard to 'countability'. Lyons (1977:452) has also noticed that in English and in some other languages countable nouns in the singular cannot be used in referring expressions, unless they have combined with them a determiner (or its syntactic equivalent). All this shows that the notion of 'referentiality' has to do with the NP rather than the noun as such.

It is important to note here that the 'non-referential' feature of the object of the V+O compounds is crucial to the interpretation of the compound as a whole. That is, the verb compound itself functions semantically as a single verb, indicating an activity. The semantic property of the object involved in the V+O compounds in Chinese can be conceived of as a 'substance without form' (cf. Wierzbicka, 1967). In more precise terms, this 'non-referential' feature of the object of the V+O compound corresponds to the philosophical concept of '*thing-in-itself*', which is defined in the *Longman Dictionary of Contemporary English* as "the aspect of an object that remains after all its properties that are perceived by the senses are taken away". In other words, it refers to an object apprehended by thought or intuition. This can be illustrated by the examples in (3) and (4): The (a-c) sentences in (3) and (4) refer to an 'unbounded' situation, namely, an activity, and they all involve the V+O compounds - 'chang-ge' ('sing-song') and 'qi-ma' ('ride-horse') respectively - which are used in an imperfective context. The object of these two compounds, i.e., 'ge' ('song') and 'ma' ('horse') respectively, cannot be construed as denoting any particular object. Rather, both 'ge' ('song') and 'ma' ('horse') in 'chang-ge' and 'qi-ma' can only be thought of as referring to the 'object' without identifying its reference.[4] On the other hand, the objects of the (d-e) sentences in (3) and (4) - which are used in a 'perfective' context, indicating a 'bounded' situation - are 'referential', viz., they are 'specific' in reference.

To sum up, the syntactic distinction between an 'incorporated' object and a 'non-incorporated' one (in a sentence) lies in the fact that the former involves an N, whereas the latter involves an NP.

4.1.2 The Semantic Status of the Object of Verb-Object Compounds

So far the discussion has focused mainly on the syntactic properties involved in the V+O compounds. In this section I will turn to another issue that relates to this type of compounds, namely, the semantic status of the object. In this respect Chinese linguists differ as to how the second constituent of the V+O compound should be treated. For instance, the syntactic distinction made here between the V+N compound and the V+NP (i.e., complement) for the explication of the aspectual differences concerned has generally been ignored by most Chinese linguists. Thus, the object of the V+O compound and that of the V+NP construction have been conflated as 'direct objects', being treated as NP's with no distinction made between them. Accordingly, most Chinese linguists have failed to notice that there exists an inherent aspectual difference between V+O compounds and V+NP complement phrases (in a sentence).

Teng (1975), on the other hand, regards the 'objects' of V+O compounds, such as, e.g., 'chang-ge' ('sing-song'), 'tiao-wu' ('jump-dance'), 'kan-shu' ('look (at)-book') as 'cognate' objects on the grounds that these objects do not qualify the activities specified in the associated verbs, but rather they specify the logical sequences of such activities. Furthermore, Teng states, such cognate objects in English are often unspecified, e.g., the verb 'sing' in the sentence 'Someone is singing'.

Teng's treatment of the 'object' of V+O compounds in Chinese as 'cognate' objects is essentially along the lines suggested in Halliday (1967), and specifically his notion of 'range', which corresponds roughly to the 'factitive' case in Fillmore (1968). The notion

of 'Range' is defined in Halliday (1967: 58) as specifying "the extent and the scope of reference of the verbal process". The only function of it, Teng (1975:157) claims, is "to add specifications to what is implied by the verb in question".

Before turning to the discussion of whether the object of V+O compounds should be understood as 'cognate' objects as suggested by Teng (1975), let us first take a closer look at the characteristics of the so-called 'cognate' objects in English to see whether the object of V+O compounds in Chinese bears any resemblance to the so-called 'cognate' object in English. Typical examples of the so-called 'cognate' objects in English are illustrated in (9) and (10):

- (9) a. She slept a restless sleep.
 b. The army fought a bitter fight against the enemy. (Baron, 1971)
 c. She danced a beautiful dance.
- (10) a. The giant laughed a hearty laugh. (Baron, 1971)
 b. Alex sighed a sigh of relief. (Baron, 1971)
 c. She sang a beautiful song.

The topic of cognate object in English has not been widely discussed by linguists. As Stein (1979) points out, linguists so far have not been able to establish adequate criteria to define the term 'cognate object' in English. According to him, the semantic features of a verb correlate with those of its objects. And the relation between the semantic features of a verb and those of its objects in some cases can be thought of as being closer than the others. Because of the semantic correlation between verbs and nouns, one could claim that all verbs have a cognate relationship to their objects, and that there are degrees of 'cognateness'. Thus, the restriction of the term 'cognate object' to specific types of objects will then be based on an arbitrary demarcation on this scale of 'cognateness'.

Baron (1971), on the other hand, has called attention to the fact that traditional grammarians differ from linguists in their treatment of cognate objects. For instance, he cited Poutsma (1928), who defined 'cognate' objects as those morphologically related to the verbs, and specifically, to those converted from intransitive verbs, as shown in (9) and (10). By contrast, linguists generally link syntactic interpretations of cognate objects with semantic arguments. As a result, such objects are closely intertwined with the meaning of their corresponding verbs. The exact nature of this relationship, however, is generally unspecified. Fillmore (1968), for example, has proposed to subsume the so-called 'cognate' object under his 'factitive' case, which signifies "the Case of the object, or being understood as part of the meaning of the verb"; nevertheless, he did not specify the exact interpretation of 'cognate' objects. But, as Baron (1971) argued, the notion of 'cognate object' is too narrow on the one hand, and too vague on the other for any syntactic analysis. In addition, he points out that most so-called 'cognate' objects in English are derived morphologically from verbs but not vice versa.[5]

Now, we come back to the V+O compounds in Chinese. The object of the compound bears no resemblance, morphologically and semantically, to the so-called cognate object in English, as shown in (9) and (10). This can be seen by contrasting the internal structure of the V+O compounds and that of the so-called cognate object verbs. For instance, the examples cited by Teng as 'cognate objects', as shown in (11), can be divided into two parts: a verb and its object.

- (11) a. chang-ge 'sing-song' ('to sing')
 b. tiao-wu 'jump-dance' ('to dance')
 c. kan-shu 'look(at)-book' ('to read')

The characteristics of the V+O compounds in (11), as contrasted with their English equivalents (i.e. the glosses), consist in their 'compositional' nature, as far as their meaning is concerned. As pointed out in the previous section, the verb of the V+O

compound in Chinese has been relegated to the status of referring only to the performance of the action, and thus cannot be used by itself to refer to the meaning designated by the whole compound as such, except in a specific context where the meaning of the compound is implied. Consider

- (12) Q. Tamen zai tiao-wu, ni yao tiao ma?
 they zai jump-dance you want jump Q-Part.
 'They are dancing now. Do you want to dance?'
- A. Bu, wo hen lei. Wo bu xiang tiao.
 NEG I very tired I NEG desire jump
 'No, I feel very tired. I don't want to dance.'

As we see from (12), the verb 'tiao' ('jump') of the V+O compound 'tiao-wu' ('jump-dance') refers only to the performance of the action, and the meaning of the entire compound, i.e., 'to dance', is specified by the object 'wu' ('dance'), contrary to Teng's claim that the object of this type of verbs only specifies the logical sequence of the activities specified in the associated verbs, which, on the other hand, applies to the English counterparts of this type of verbs. On the contrary, the verb of the compound is determined by the noun. In other words, the meaning of the verb depends on the noun (i.e., object) it goes with. This point is extremely important in the interpretation of V+O compounds in Chinese, and will be further discussed in the next section. Seen in this light, the V+O compound 'tiao-wu' in Chinese can be taken as a semantic decomposition of the verb 'to dance' in English. That is, the English verb 'to dance' indicates both the action and the characteristic semantic feature of the object connotated by the verb. Therefore, 'to dance a dance' in English is regarded as semantically redundant (except for literary or rhetorical purposes). In contrast, the object of V+O compounds in Chinese serves to delimit the semantic range of objects that can co-occur with the verb.

It was mentioned earlier that the incorporation of the object into the verb has to do with the 'non-directed' verb content of verbs in Chinese on the grounds that the

Mittwoch (1982) in this regard has taken a new look at this class of verbs in English and focused on the aspectual differences involved. She points out that although (15a) does indeed entail (15b), however, on a strict interpretation of 'something', (16a) does not entail (16b).

- (15) a. John ate.
 b. John ate something.
- (16) a. John is eating.
 b. John is eating something.

The differences between 'eating' and 'eating something', according to Mittwoch (1982:114), all hinge on the fact that 'eat' and 'eat something' enter different 'time schemata', in the sense of Vendler (1967). 'Eat' is an activity predicate, whereas 'eat something' is an accomplishment. Both activities and accomplishments contain 'process' verbs. She asserts that "a process verb without an object or with an object NP that lacks a quantifier, i.e., that consists of a 'bare' plural or mass nouns, enters into an activity; a process verb with a quantified object NP enters into an accomplishment" (1982:114). In addition, 'something' is usually regarded as a quantified NP and thus 'eat something' is construed as having the nature of an accomplishment.

What is of interest to us here is her discussion of the semantic feature of the quantified NP 'something' in English in connection with the aspectual properties (of a sentence). This issue also relates to the discussion of a group of V+O compounds that resembles this class of verbs in English.

In an appendix, Mittwoch (1982) remarks that the determiner 'some', which features as an element in this indefinite pronoun, denotes "an unspecified, and typically unknown (to the speaker) member of the class denoted by the noun". This use is brought out by the addition of 'or other' after the noun, as in 'some book or other', and

thus it occurs only with singular count nouns, i.e., [+count].[8] On the other hand, the 'thing' component in 'something' is a bound form. Hence, the indefinite pronoun 'something' is marked as having the following semantic features: [+delimited quantity, +specified quantity, +count, +singular].

Mittwoch (1982) invoked several syntactic and semantic tests to substantiate her claim that the predicate 'eat something' refers to an accomplishment. One of them concerns the co-occurrence restriction of telic versus atelic durational adverbials in a sentence. Atelic durational adverbials occur only with activities but not with accomplishments, whereas telic durational adverbials occur only with achievements and accomplishments. The following are Mittwoch's examples, illustrating this contrast:

(17) John ate peanuts/porridge for ten minutes.

(18) *John ate something for ten minutes.

(17) is well-formed, but (18) is normally regarded as deviant. She claims that (18) may become acceptable to some speakers under the pressure of a special context, as in (19):

(19) a. John ate porridge for ten minutes.

b. I didn't think it was porridge but he certainly ate something for ten minutes.

As Mittwoch (1982:115) points out, for want of a pronoun that is [-delimited quantity] the speaker treats 'something' as though it were such a pronoun, or else gives it a partitive reading. Furthermore, in the absence of a context, 'something' still cannot occur with the telic durational adverbials, as the following examples illustrate:

(20) a. *John ate some peanuts in ten minutes.

b. ??John ate something in ten minutes.

c. John ate half a pound of peanuts in ten minutes.

She holds that the reason for the unacceptability of (20a) is due to the fact that telic durational adverbials focus on the shortness of the time-span in which an accomplishment is completed, and in the absence of a specified quantity object NP, John's accomplishment in (20a) cannot be evaluated, as (20c), which refers to a specified quantity object NP, is well-formed. Here, Mittwoch's explanation requires further elaboration. Note that all the sentences in (20) refer to a single, complete event. It has been pointed out by some linguists (e.g., Wierzbicka, 1967; Gawron, 1981; Kabakciev, 1984) that the notion of 'perfectivity' is usually associated with a total event in which the object NP is interpreted as 'bounded' in the sense that it is 'fixed' and 'specific' by virtue of having participated in a complete event. *An NP is bounded in a clausal context if it is specific with respect to the amount of its referent.* By 'specific' is here meant the speaker can answer the question 'which one' with some identifying description. For instance, the object NP 'half a pound of peanuts' in (20c) denotes a 'specific' quantity of peanuts in that context, and therefore can be construed as 'bounded'. In contrast, the object NP 'some peanuts' in (20a) is seen as 'non-specific', and is thus 'unbounded'. Without a context, (20b), which contains 'something', is also unacceptable (though better than (20a)). However, sentence (21) is well-formed in that the object NP 'something' can be taken as 'bounded' in a specific context. In this case, it is the extraposed relative clause - 'which took me half an hour to translate' - that provides the context for 'something' to be identified as a 'specific' quantity.

- (21) John wrote something in ten minutes which took me half an hour to translate.

Next, Mittwoch (1982:118) raises the question of how to account for the fact that any sentence with 'eat, read, etc.', implies a second argument to the verb. A sentence like (22), she concedes, allows us to ask the question: 'What did he eat?'

- (22) He ate.

Q: What did he eat?

However, the answer to this question need not contain a quantifier; it can take the form of (23):

(23) He ate peanuts/porridge.

Therefore, the interrogative pronoun 'what' lacks the feature [+delimited quantity] inherent in 'something'. Nevertheless, sentence (23) does allow us to continue with the question 'How many peanuts/how much porridge did he eat?' In this case, she claims, it is the tense that is crucial in that (23) is in the simple past tense. Here, the process of eating peanuts or porridge is seen as having come to an end. This fact also suffices to explain why the inference from (22) to (24) is valid.

(24) He ate something.

If we employ the same question-and-answer strategy, according to her, we will encounter difficulty with (25), which represents a more typical use of intransitive 'eat' than (22).

(25) He is eating.

(26) He is eating something.

(27) Q. What is he eating?

A. He is eating peanuts/porridge.

In the case of (25), the further question 'How many peanuts/how much porridge is he eating?' is not appropriate because (25) and the answer in (27) refer to a process that is still going on at the time of utterance. Hence, the inference from (25) to (26) is not valid. She points out that the real problem here arises from the fact that English does not possess an assertive pronoun (such as 'things' or 'thing') that is [-delimited quantity]. Nor does English have the means of making the pronoun 'something' partitive, which would have a similar effect to that of an unquantified pronoun.

Harking back to the verb-object compounds in Chinese, I mentioned earlier that one group of V+O compounds behaves semantically more or less like object-deletion

verbs in English. To properly understand the problems involved in this group of compounds, we first have to look into the Chinese near-equivalent of the indefinite pronoun 'something' in English. In a footnote, Mittwoch (1982:119) wonders whether there exists a language that possesses an unquantified indefinite pronoun or that can make its indefinite pronoun partitive. For example, she mentions that in French the partitive pronoun 'en' is anaphoric, but the partitive use of 'de', as in 'Il mange du pain', does not occur with 'quelque chose'. Nor do analogous constructions occur with the Russian and Finnish pronoun for 'something'. In this connection Chinese possesses both possibilities: that is, Chinese has an unquantified indefinite pronoun and can make the indefinite pronoun partitive. To begin with, the indefinite pronoun 'shenma' in Chinese is unquantified, i.e., having the semantic feature [-delimited quantity], and it corresponds to both 'what' and 'something' in English. In actual fact, 'shenma' functions both as an interrogative pronoun and as an indefinite pronoun. However, it should be pointed out here that Chinese, in the strict sense, does not have a full equivalent of the indefinite pronoun 'something' in English in that the 'thing' component in 'something' is interpreted as a bound form. The Chinese near-equivalent of 'something' in English is 'shenma dongxi' ('what-thing'), which is analogous to 'quelque chose' in French. The unquantified property of the indefinite pronoun in Chinese can be seen by contrasting (28) with (29) in which the indefinite pronoun 'shenma' is made partitive by adding a 'partitive numeral' such as 'dian(r)'/or 'xie(r)' ('bit').

- (28) Q. Ta chi le₁ shenma?
 he eat le₁ what
 'What did he eat?'
- A. Ta chi le₁ fan
 he eat le₁ rice
 'He ate rice.'
- (29) Q. Ta chi le₁ dianr shenma?
 he eat le₁ bit what
 'What did he eat?'
- A. Ta chi le₁ dianr huasheng
 he eat le₁ bit peanut
 'He ate some peanuts.'

Note that the partitive numeral 'dianr' ('bit') in Chinese is somewhat analogous to the partitive article 'de' in French, except that while the latter does not occur with 'quelque chose' in French, the former does occur with the indefinite pronoun in Chinese, as can be seen from the examples in (30):

- (30) a. Wo xian chi dianr shenma.
 I want eat bit something
 'I want to eat something.'
- b. Ta chi le₁ dianr shenma, shuoyi
 he eat le₁ bit something therefore
 xianzai bu e le₂
 now NEG hungry le₂
 'He has eaten something, therefore he doesn't
 feel hungry now.'

To further explicate the nature of the indefinite pronoun 'shenma', let us contrast the English examples in (27), which are used in the present progressive tense in English, with their Chinese counterparts in (31):

- (31) Q. Ta zai chi shenma?
 he zai eat what
 'What is he eating?'
- A. Ta zai chi huasheng/zhou
 he zai eat peanut/(rice) porridge
 'He is eating peanuts/(rice) porridge.'

As Mittwoch pointed out above, English does not have the means to make the indefinite pronouns partitive; thus, with the examples in (27), the further question 'How

many peanuts/how much porridge is he eating?' is not appropriate in that both the question and the answer refer to a process that is still going on at the time of utterance. Here, the problem with the English examples in (27) lies in the fact that 'something' is interpreted as referring to a single entity, i.e., [+delimited quantity]. In Chinese this problem does not arise in that the indefinite pronoun is 'unquantified', i.e., [-delimited quantity]. Hence, the partitive numeral 'dianr' can still be added to the examples in (31), as shown in (32):

(32) Q. Ta zai chi dianr shenma (dongxi)?
 he zai eat bit what thing
 'What is eating?'

A. Ta zai chi dianr huasheng/zhou
 he zai eat bit peanut/(rice) porridge

As a result of this semantic distinction between the indefinite pronoun 'shenma' in Chinese and 'something' in English, the aspectual differences between V+O compounds in Chinese and the class of so-called object-deletion verbs in English emerge. First, the aspectual differences pointed out by Mittwoch (1982) between 'eating' and 'eating something' in English, namely, activity versus accomplishment, do not arise in Chinese. That is to say, the 'unquantified' indefinite pronoun 'shenma' in Chinese plays no role in connection with the interpretation of aspectual differences (in a sentence), as does the indefinite pronoun 'something' in English. Chinese resorts to V+O compounds to refer to activities on the one hand, and resultative verb compounds to refer to accomplishments on the other hand, as the examples in (33) illustrate.

(33) a. Ta chi le₁ fan (le₂)
 he eat le₁ rice (le₂)
 'He ate/has eaten.'

b. Ta ba fan chi-guang le₁
 he BA rice eat-finish le₁
 'He ate up the rice.'

A question arises at this point. That is, why does such an aspectual difference between 'eating' and 'eating something' - activity vs accomplishment - exist in English

but not in Chinese? To provide a satisfactory answer to this question, we have to turn to the difference in verbal content between English and Chinese. As discussed in Chapter 3, verbs in Chinese are 'non-directed', whereas verbs in English are 'directed'. The consequence of this semantic distinction is that accomplishments in English are formed by syntactic means. That is, they all involve an activity and a specific noun phrase, which indicates the terminal point of an event. In addition, accomplishments in the past or perfective tense are interpreted as having attained the goal. In most cases, the articular noun phrase (following the verb) denotes the temporal boundedness of an event. Analyzed from this standpoint, the quantified NP 'something' in the accomplishment predicate such as 'eat something' is to be understood as functioning just like an articular noun phrase, as can be seen from the examples in (34) taken from Mittwoch (1982):

- (34) a. John wrote an article for the Times.
 b. John wrote something for the Times.

According to Mittwoch (1982:118), (34a-b) are "most naturally interpreted as referring to a single occasion because the quantified object is taken to refer to a single entity". Hence, 'something' in (34b) is marked as having the semantic features [+delimited quantity, +specified quantity, +count, +singular]. Given this, the function of 'something' in (34b) does not differ from that of an articular NP as in (34a).

Because of its 'non-directed' verb content, Chinese falls back on verb compounds to express accomplishment and achievement sentences which, on the other hand, are syntactically formed in English. Resultative verb compounds are lexically derived. One thing to note is that the inherent derivational processes in Chinese have effects on the intrinsic aspectual properties of the verbs on which they operate. Accordingly, while verbs in Chinese are marked for temporal boundedness of events, the objects play a lesser role in the interpretation of the aspectual differences (in a sentence).

(33) can serve as an example to illustrate this point: (33b) involves a resultative verb compound, referring to the end-point of an event, whereas (33a) contains a V+O compound, denoting an activity.

Another issue to be dealt with in this section concerns the fact that the objects of the class of so-called object-deletion verbs in English are usually interpreted as deleted, while on the contrary the objects of the group of V+O compounds in Chinese which falls under this class are necessarily present. For instance, 'eating' in English is taken as an activity, and its Chinese counterpart is rendered as 'chi-fan' ('eat-rice'), in which the object 'fan' ('rice') must be present.[9]

Declerck (1976) in this connection has expressed a different view on this class of verbs in English. She holds that the objects of this class of verbs are not deleted but presupposed and further adds that "the object implied by pseudo-intransitive verbs (e.g., eat) is not part of the meaning of the sentence but one of its existential presuppositions. The sentence 'John is eating' implies that there must be something which John is eating, but this is no sufficient reason to assume that 'something' or some other object NP is present in the underlying structure of the sentence" (1976:18). On the face of it, Declerck's claim has some merit in itself, yet her description of this class of verbs in English still falls short of accounting for the aspectual differences between 'eating' and 'eating something' suggested by Mittwoch (1982).

In so far as the lexical properties involved in this class of verbs in English are concerned, the object NP implied by the verb (of this class) is, in more precise terms, semantically 'tautological' in the sense that the semantic features involved in the verb and those involved in the noun are overlapping and redundant. For example, the so-called 'cognate' object verbs discussed in previous section such as, e.g., 'sing, dance, etc.', are included in this category.[10] Thus, sentences like (35) and (36), which

involve this class of verbs and refer to an activity, need not specify their object NPs in their normal contexts.

(35) John is eating.

(36) Peter is drinking.

However, if specific information is to be conveyed concerning the activity, then the object NP is specified, as in (37) and (38):

(37) John is eating porridge/peanuts.

(38) Peter is drinking water.

The semantic property of the object used in sentences like (37) and (38) with an imperfective verb (i.e., in the present progressive tense here) is to be treated as an endless 'continuum', that is, as a 'substance without form' (Wierzbicka, 1967). Thus, in (38) the object 'water' cannot be interpreted as 'all the water', nor as 'some water' on the grounds that the quantified NPs, in varying degrees, quantify the object. That is to say, they fix the form of the substance, and thus show a quantity that can be measured. This is incompatible with the interpretation of sentences like (37) and (38) in that they refer to a sequence of actions (a sequence of single acts); however, the successive acts of this sequence cannot be counted. This fact illustrates the reason why it is invalid to infer (26), i.e., 'He is eating something', from (25), i.e., 'He is eating', as mentioned earlier. [Something] refers to a fixed, specific quantity.

As regards the group of V+O compounds in Chinese that corresponds to the class of object-deletion verbs in English, the object of the compound is necessarily present. For instance, the Chinese counterparts of sentence (35) and (36), as shown in (39) and (40) respectively, actually relate to the ones in (37) and (38). That is, the specific information concerning on what kind of object (or thing) the activity is focused must be explicitly indicated.

- (39) John zai chi zhou/huasheng
 John zai eat rice porridge/peanut
 'John is eating porridge/peanuts.'
- (40) Peter zai he shui
 Peter zai drink water
 'Peter is drinking water.'

The object (of the compound) is usually construed as being incorporated into the verb, and the V+O compound as a whole refers to an activity. The syntactic properties of V+O compounds have been discussed in Section 1. The semantic properties of the objects (of the compounds) in (39) and (40), like that of the objects of the verbs in (37) and (38), are also interpreted as denoting a 'substance without form'. Thus, this group of V+O compounds in Chinese does not differ from the class of object-deletion verbs in English, if analyzed in terms of the semantic and aspectual properties involved.

The question that remains to be discussed is how to account for the fact that the object of the V+O compound in Chinese must be necessarily present, whereas the object of the so-called object-deletion verbs in English is optional. Here, the difference all boils down to the lexical status of the verb in Chinese and English. As was mentioned in the previous section, the verb of V+O compounds in Chinese refers only to the performance of an action, and the meaning of the compound itself derives from integration of the semantic features of the object. This fact shows that the verb (of the compound) is semantically dependent on the noun (of the compound).

In this respect Kaznowski (1973) has made some very interesting remarks on the semantic priority of nouns over verbs in the sense that the speaker communicates a state or process in which a noun is shown to be with the help of a verb. On the other hand, it is generally assumed by linguists that verbs play a more central role than nouns in the generation of sentences. As he points out, this idea of centrality of verbs assumed by linguists stems from the fact that verbs exhibit the following two character-

istics: connotation and determination.[11] The former is a semantic function and the latter is a syntactic one. However, he argues that the view held by linguists that verbs are considered to be syntactically central does not necessarily commit one to maintain their semantic priority over nouns in the semantically-based lexical structure. This fact can be seen from the connotation dependency between nouns and verbs, which indicates that verbs must connote nouns because they are incapable of being semantically independent. And by connotating nouns, verbs are dependent on them. For this reason he claims that the syntactic centrality of verbs has to be distinguished from the (lexically) semantic centrality of nouns.

Kaznowski's (1973) description of semantic priority of nouns over verbs has provided an indirect answer to the question of why the object of the V+O compound in Chinese is necessarily present. That is to say, the verb (of the compound) is entirely dependent on the noun semantically. It should be mentioned that the verb of the V+O compound, to a great extent, has lost its 'autonomous' status - syntactically and semantically - in the sense that it cannot connote nouns alone; instead, the determination of its meaning hinges totally on the semantic features of the noun concerned. This point is clearly shown by the examples in (41):

- (41) a. kan-shu 'look (at)-book' ('to read')
 b. tiao-wu 'jump-dance' ('to dance')
 c. kai-che 'operate-car' ('to drive')

The verbs of the compounds in (41) - 'kan' ('look at'), 'tiao' ('jump') and 'kai' ('operate') - are incapable of semantically connotating the nouns of the compounds, i.e., 'shu' ('book'), 'wu' ('dance'), and 'che' ('car'); on the contrary, it is the semantic features of the nouns that determine the interpretation of the whole compound. The English counterparts of the compounds, as shown in the glosses, on the other hand, are capable of semantically connotating the nouns themselves. Owing to their 'analytical'

nature, the Chinese verb-object compounds in (41) can be thought of as referring to the semantic representations of their English counterparts (in the glosses).

The verbs of the group of V+O compounds corresponding to the class of object-deletion verbs in English such as, e.g., 'chi-fan' ('eat-rice'), 'he-jiu' ('drink-wine'), can, more or less, be seen as having lost their 'autonomous' lexical status, despite the fact that, in comparison with those of other groups of V+O compounds, they are less dependent on the nouns. As opposed to their counterparts in Chinese, verbs in English still retain their 'autonomous' lexical status. Thus, in English the semantic priority of nouns over verbs is confined only to the lexical structure, but not necessarily reflected in the syntactic structure. This difference in the lexical status of verbs between Chinese and English explains why the object of V+O compounds in Chinese must be necessarily present (in the syntactic structure) on the one hand, and why the object of the class of so-called object-deletion verbs in English are optional (in the syntactic structure) on the other.

4.2 Verb Reduplication

4.2.1 Syntactic Characterization

In this section I will turn to another issue that concerns the V+O compounds. That is, this type of verb compounds occurs in the so-called verb reduplication constructions. By verb reduplication, I refer to a construction in which the verb is repeated as the second half of the construction, and is followed by an adverbial phrase. Verb reduplication has also been treated as verb copying by other linguists (e.g., Li & Thompson 1981a; Chu 1983).[12] By way of illustration, consider the examples in (42) and (43):

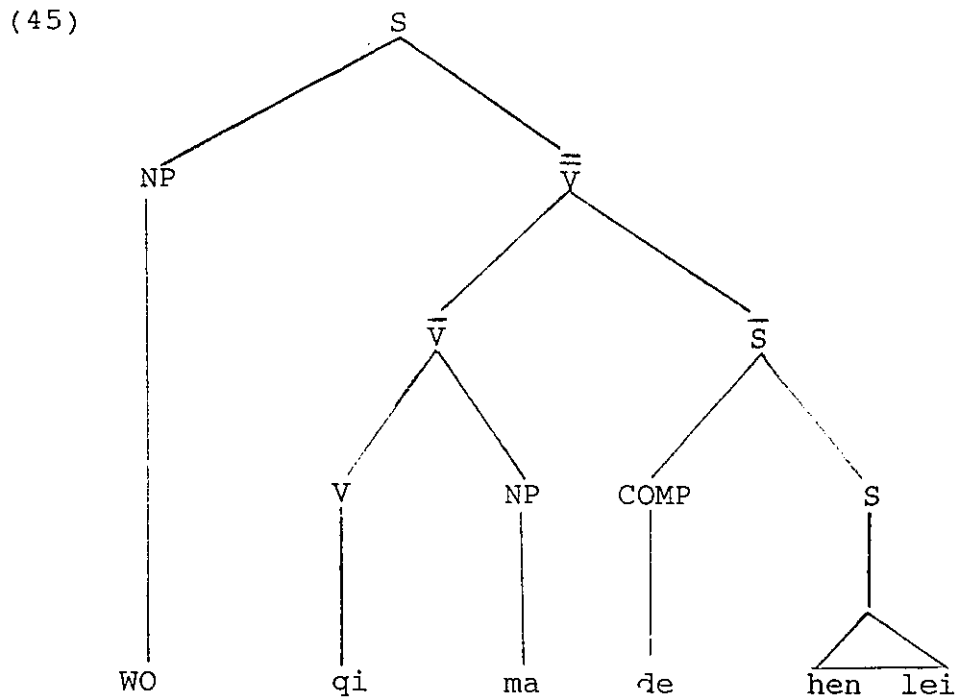
- (42) a. Ta kan-shu kan de kuai
 he look-book look Particle fast
 'He reads very fast.'
- b. Ta kan-shu kan de lian wanfan dou
 he look-book look Particle even supper even
 wang le₁ chi
 forget le₁ eat
 (Lit.) 'He was so absorbed in his reading that
 he even forgot his supper.'
- (43) a. Ta qi-ma qi le₁ zhengge xiaowu
 he ride-horse ride le₁ whole afternoon
 'He rode/was riding for the whole afternoon.'
- b. Ta qi-ma qi de hen lei
 he ride-horse ride Particle very tired
 (Lit.) 'He rode to such an extent that he felt
 totally exhausted.'

On the whole, the examples in (42) and (43) can be seen as being composed of two parts: the first part involves a verb and an object, and the second part contains a reduplicated verb and an adverbial phrase. All the examples in (42) and (43) involve V+O compounds, i.e., 'kan-shu' (look-book'), and 'qi-ma' ('ride-horse').

Different attempts have been made by Chinese linguists to account for the verb reduplication constructions. However, most treatments have focused mainly on the syntactic constraints (i.e, output constraints) of this type of constructions. C-T Huang (1982), for example, has attempted to tackle the verb reduplication constructions in terms of the \bar{X} -theory by invoking the \bar{X} -Filter. The function of verb reduplication, according to him, is to create a structure meeting the requirement imposed by the filter, and thus saving the otherwise ill-formed structure. Huang (1982) cites the examples in (44) in illustration of the \bar{X} -filter:

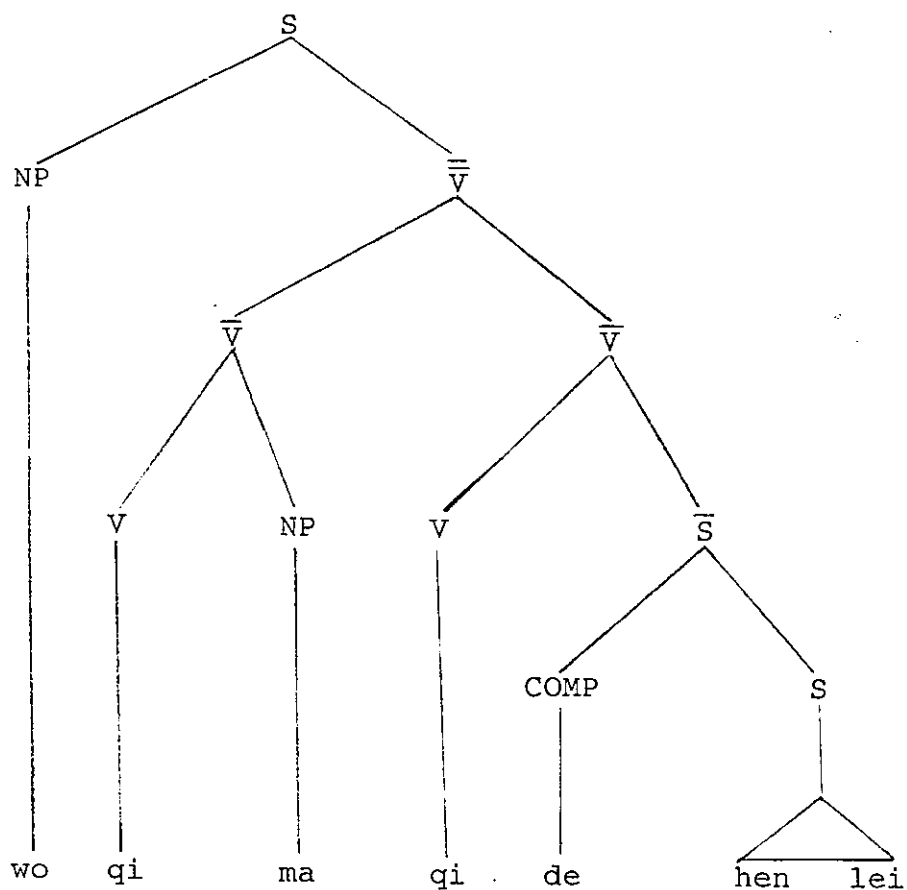
- (44) a. *Wo qi ma de hen lei
 I ride horse Particle very tired
 'I rode a horse until I got tired.'
- b. Wo qi ma qi de hen lei
 'I rode a horse until I got very tired.'

First, he points out that the correct representation of (44a), where verb reduplication has not taken place, should be as follows (1982:49):



Second, he claims that sentences with 'verb complements' that are dominated by \bar{V} do not involve verb reduplication. And he imputed the ill-formedness of (45) to the restriction imposed by the filter. Thus, the function of verb reduplication is to create a structure so as to meet the requirements of the filter. This condition is such that the well-formed construction (44b) is derived from (45) by introducing the reduplicated verb under the dominance of a newly created \bar{V} -node, with the reduplicated verb treated as the head of this \bar{V} occurring to the left of the (resultative) clause, as shown in (46):

(46)



C-T Huang (1982) states that (46) can be taken as a structure that satisfies the \bar{X} -filter, and adds that "the only thing the filter requires is that the newly created \bar{V} on the right is the head of the \bar{V} , not the original \bar{V} on the left" (1982:50).

S-F Huang (1984) on the other hand has given a slightly different analysis. He places the verb reduplication phenomenon in a wider context, and regards it as one piece of evidence in support of his claim with respect to syntactic change in Chinese. The bulk of Chinese VP syntax, according to him, can be interpreted as the product of an interplay between two opposing forces: On the one hand, verb compounding morphology always increases the number of arguments per verb, as in the case of V+O compounds, but on the other hand, the surface structure condition (in Chinese) impos-

es the restriction that no more than one constituent is allowed to follow the main verb.[13] As a result of this restriction, the complexity of the verbal structure is reduced. This interplay, Huang contends, has led to the development of the verb reduplication construction. For example, Chinese syntax contains structures that allow resultative or directional complements to occur following V+O compounds. The consequence of this is that these structures have created outputs that would appear to violate the surface structure condition in Chinese. However, verb reduplication saves those derivations. The examples in (47) illustrate these two types of complements:

- (47) a. Ta zou-lu zou dao huochezhan
 he walk-road walk reach railway station
 (Lit.) 'He walked as far as to the railway station.'
- b. Ta chang-ge chang de houlong dou ya le₁
 he sing-song sing Part. throat even mute le₁
 (Lit.) 'She sang to such an extent that she lost her voice.'

Of the above two syntactic treatments dealing with verb reduplication constructions in Chinese, it seems to me that S-F Huang (1984) has offered a more satisfactory account in that he has linked the surface structure constraint to verb compounding morphology in Chinese. By contrast, C-T Huang (1982) has based his analysis purely on structural grounds, that is, by invoking the \bar{X} -filter. Accordingly, he failed to realize that the derivational processes have effects on the internal structure of the verbal constructions in Chinese. In spite of their difference in theoretical orientation, both analyses invoke the surface structure constraint as the syntactic motivation for the reduplication of the verb.

But, so far as I can see, the syntactic description of verb reduplication constructions in terms of the surface structure constraint, as done by C-T Huang (1982) and S-F

Huang (1984), has touched only the surface phenomenon of this type of constructions in that the semantic motivation for the reduplication of the verb is totally disregarded. The reduplication of the verb, for the most part, is closely linked to the semantic scope of adverbial modification. The semantic interpretation of the reduplication of the verb will be the topic of the next section.

4.2.2 Semantic Characterization

In the following discussion I will leave the syntactic issues aside and confine myself to a semantic description of verb reduplication constructions in Chinese. To start with, let us take another close look at the internal structure of the verb reduplication construction. Notice that the element which follows the 'reduplicated' verb always involves an adverbial phrase, denoting result, extent, duration, and direction, as the examples in (48) illustrate:

- (48) a. Ta kan-shu kan de lian wanfan dou wang
 he look-book look Part. even supper even forget
 le₁ chi. (Result)
 le₁ eat
 (Lit.) 'He was so absorbed in his reading that
 he forgot his supper.'
- b. Ta kan-shu kan de hen kuai (Extent)
 he look-book look Part. very fast
 'He reads very fast.'
- c. Ta kan-shu kan le₁ wu-ge zhongtou (Duration)
 he look-book look le₁ five hour
 'He read for five hours.'
- d. Ta zou-lu zou dao huachezhan (Direction)
 he walk-road walk reach railway station
 'He walked (as far as) to the railway station.'

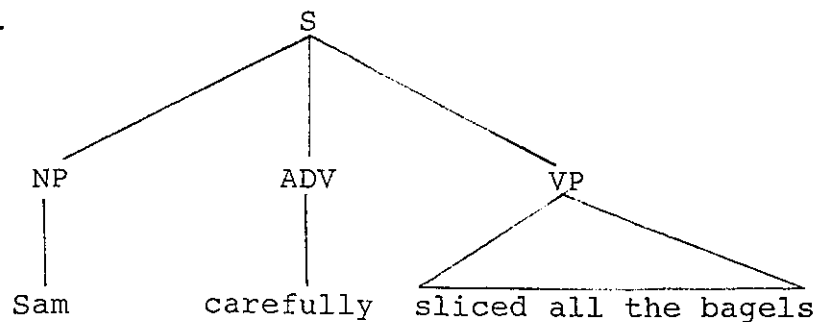
All the adverbials in the examples of (48) can be construed as V-modifiers. That is to say, they all characterize the events referred to by the verbs. For example, (48a) specifies the 'resultative' state of his reading, and (48c) specifies the length (or duration) of his reading. Moreover, the adverbial phrases all occur in the post-verbal position.

Seen from this standpoint, there is a strong affinity between the 'reduplicated' verb in the sentence and the scope of adverbial modification.

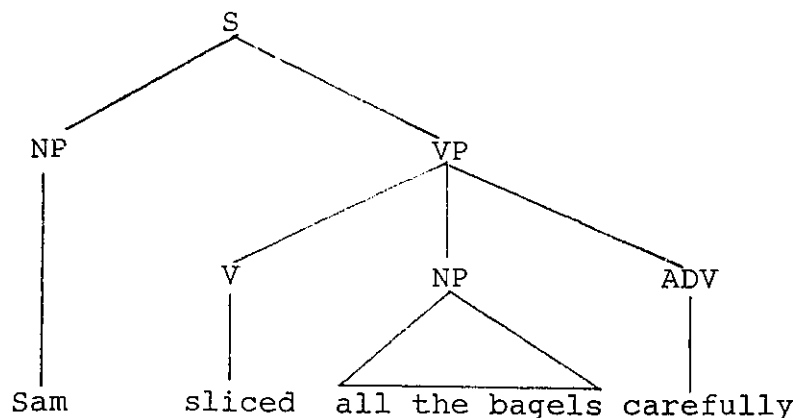
Before proceeding, a few remarks on adverbial modification seem to be in order here. McConnel-Ginet (1982), for example, has distinguished two types of adverb modification: VP-internal versus VP-external modification. VP-internal adverbs "restrict the range of events referred to", whereas VP-external adverbs "take verbal reference for granted and say something about the event or situation (partially) designated by the VP" (1982:159). The examples in (49) are taken from McConnel-Ginet (1982), illustrating the distinction of scope of modification, as shown by the tree diagrams in (50):

- (49) . a. Sam carefully sliced all the bagels.
 b. Sam sliced the bagels carefully.

(50) a.



b.

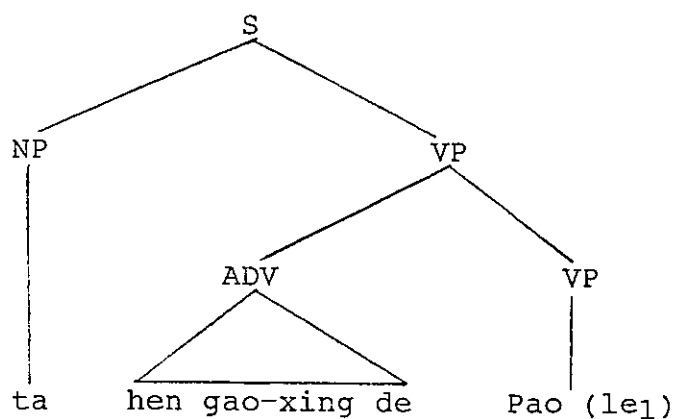


The adverb 'carefully' is interpreted as VP-external modification in (49a), but as VP-internal modification in (49b).

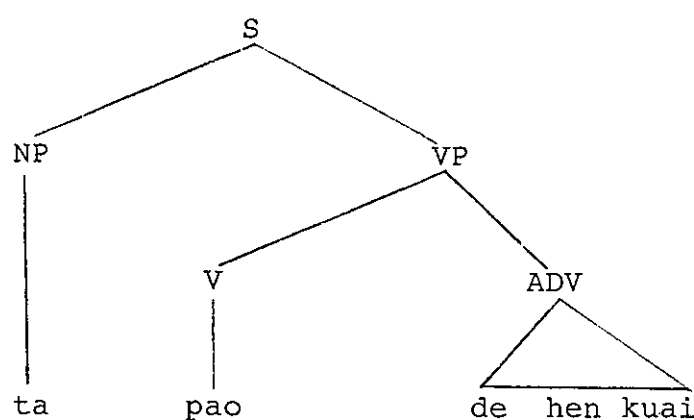
The distinction between VP-internal modification and VP-external modification has a bearing on the syntactic scope of adverbial modifiers in Chinese. Ross (1984), for example, has proposed a structural explanation for meaning differences associated with the position of adverbial modifiers with regard to the verbs in Chinese. She holds that the relevant factor in accounting for the verb and modifier ordering in Chinese has to do with modifier scope. That is, modifiers of the VP occur preverbally, and modifiers of the verb occur postverbally. The preverbal versus postverbal modification in Chinese are shown by the examples in (51), with the tree diagrams in (52):

- (51) a. Ta hen gao-xing de pao le₁
 he very happily run le₁
 'He ran away very happily.'
- b. Ta pao de hen kuai
 he run Part. very fast
 'He runs very fast.'

(52) a.



b.



In (51a) the adverbial phrase 'hen gao-xing de' ('very happily') occurs preverbally, referring to VP-external modification; in (51b), the adverbial phrase 'hen kuai' ('very fast') occurs postverbally, referring to VP-internal modification.

Basically, Ross (1984) has made some correct observations on the scope of adverbial modification in Chinese. That is, modifiers of VP occur preverbally, whereas modifiers of the verb occur postverbally, as shown in (51). However, her analysis still leaves much to be desired. She claims that "when a specific object or complement of a verb is crucial to the interpretation of the modifier, preverbal modification will be required, while when it is not, modification will be postverbal", yet she gives no further explanation of this point. Thus, the correlation between the syntactic position of adverbial modifiers and the semantic characterization is still left unaccounted for. For

example, (51a), which involves preverbal modification, differs from (51b), which involves postverbal modification, in implication: the former implies that 'He ran away in a happy manner', whereas the latter implies that 'He is a fast runner'. This semantic distinction, it seems to me, cannot be explained by resort only to the syntactic positions of modifiers. There exists in Chinese a correlation between the syntactic order of modifiers and the semantic scope of modification.

As mentioned earlier, the adverbial phrases following the reduplicated verb in (48) involve different semantic interpretations. Here, we are confronted with two semantically related issues: First, why are these semantic interpretations associated only with postverbal modification (but not with preverbal modification)? Second, what is the semantic motivation (apart from the syntactic one, as mentioned above) for the reduplication of the verb in the verb reduplication constructions involving V+O compounds? Before taking up these two issues, we first have to look into the correlation between the class of adverbs and the semantic scope of modification.

In this regard Vendler (1984a) has provided a semantic analysis of adverbs, which I will adopt in the present thesis for the discussion of adverbial modification in Chinese. To begin with, he distinguishes two notions - 'Action' and 'Event' - for the interpretation of action sentences: "Events are caused, but actions are done or performed". Vendler's overriding concern for distinguishing these two notions has to do with the clarification of the relation between the notion of 'agency' and that of 'causation' involved in a group of verbs in English (e.g., break, open, etc.), which exhibits the so-called 'Causative/Inchoative' alternation, as shown in (53):

- (53) a. The glass broke.
 b. He broke the glass.

In the linguistic literature, the verb 'break' is usually treated as a 'causative' verb in (53b), but as an 'inchoative' verb in (53a) (cf. Hale & Keyser 1985). But, as Vendler points out, the phrase 'the breaking of the glass' denotes an event with the intransitive reading, as in (53a), but an action with the transitive one, as in (53b). More exactly, the action of 'breaking the glass' in (53b) is nothing but the event of 'the breaking of the glass' in a Causative frame, which can be shown as follows:

(54) break glass = C (glass breaks)

(54) can be generalized as (55):

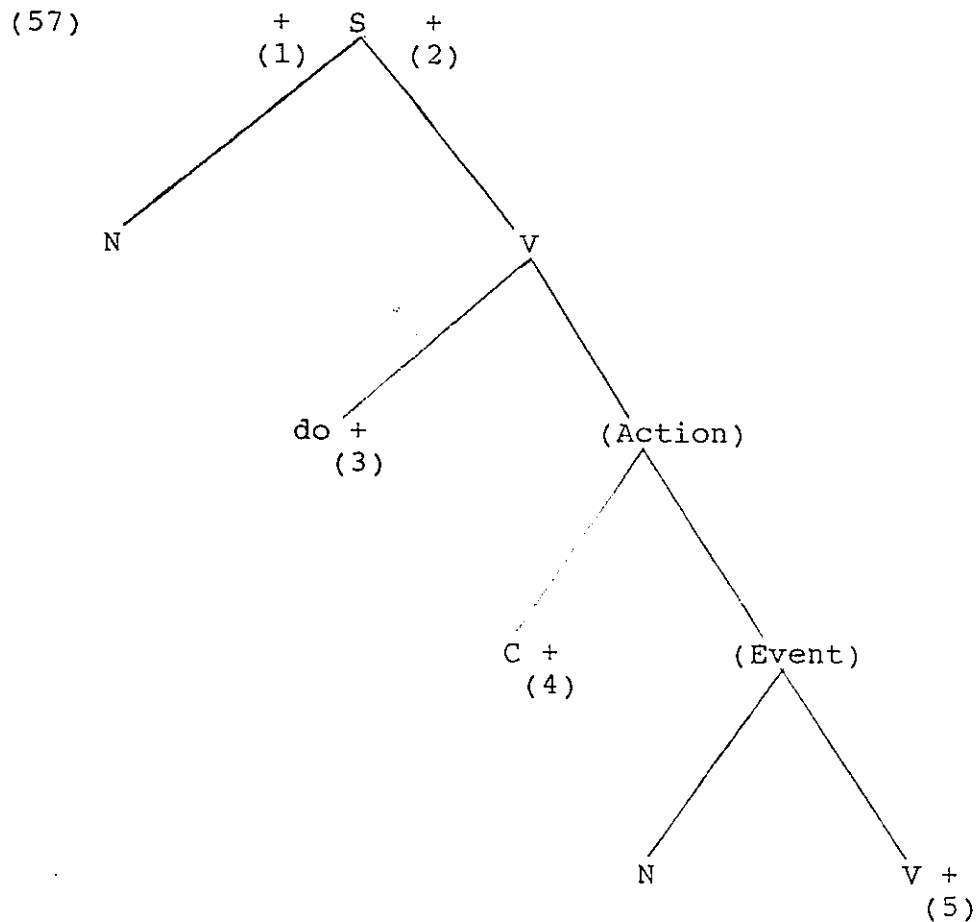
(55) Action_i = C (Event_i)

In a sense, what is done or performed, that is, the action itself, involves the 'causal factor'. For this reason Vendler (1984a: 298) asserts that "an action is no mere event (intentionally caused by an agent), but an event in a Causative frame (done or performed by an agent)". And he defines the general form of action sentences as below (1984a: 299):

(56) (Agent) does C (Event)

(56), to some extent, can be conceived of as the conceptual representation of action sentences. The notions of 'action' and 'event' will be further spelled out in the next chapter.

Next, Vendler attempts to provide a semantic account of the scope of modification of adverbs in terms of his analysis of action sentences. He illustrates the general form of action sentences in (56) with the following tree structure, in which the adverb-slots are marked by '+' signs (the numbers attached are mine):



As diagram (57) shows, there are several slots where adverbs can characterize (in a sentence). For instance, the adverb-slots that surround the S-node involve two types of adverbs: 'Sentence-adverbs' (e.g., probably, unfortunately), and 'illocutionary-adverbs' (e.g., honestly, sincerely). What is of interest to us here, however, are the adverb-slots that characterize 'Action' and 'Event', that is, slots (3-5) in (57), which have to do with the syntactic scope of modification in Chinese.

For a start, let us examine closely the semantic nature of the types of adverbs that occur with 'Action' and 'Event'. The following are Vendler's (1984a) examples, illustrating the semantic difference involved in the sentences:

(58) He drove the car fast.

(59) He drove the car carefully.

(60) He drove the car easily.

Sentence (58), according to Vendler, has the following implication:

(58') The car ran fast.

He claims that this fact clearly indicates that 'fast' belongs to the verb in the 'event' sentence in that 'driving a car' is "nothing but making a car run by some manipulations". Thus, adverbs like 'fast' are called 'Event' adverbs.

(59), on the other hand, has the following implications:

(59') a. He was careful in driving the car.

b. He drove it in a careful manner.

Here, Vendler argues, the adverb 'carefully' does not belong to 'run', as in (58), but to 'drive', i.e., C(run); this is due to the fact that 'the car did not run carefully', but 'was driven carefully'. That is, he did some careful driving. He further points out that such manner adjectives as 'careful, skillful, elegant' are used to "describe the performance or the execution of the act". Moreover, most of these adjectives can also be ascribed to the agent directly in relation to the action in that they "posit a trait in the agent, which is manifested in the performance" (1984a: 301).[14]

Finally, the implications of (60) are the following:

(60') a. It was easy for him to drive the car.

b. For him it is an easy thing to do.

He claims that neither 'fast' nor 'careful' would fit into these frames in (60') because 'easy' does not "qualify the event, nor the action performed in itself, but the doing of the action" (1984a: 301).[15] Adverbs like 'easily' are called 'facility' adverbs.

It is of interest in this connection to note that Vendler's semantic characterization of adverbs in terms of his analysis of action sentences coincides with the syntactic order of adverbial modifiers in Chinese. That is, all the adverb-slots in (57) correspond to the syntactic positions of adverbial modifiers in Chinese. For example, slot

(5), which characterizes 'Event', corresponds to postverbal (i.e., VP-internal) modification in Chinese, whereas slots (3-4) correspond to preverbal (i.e., VP-external) modification in Chinese. To put it briefly, there exists a one-to-one correspondence between syntactic and semantic scopes of modification in Chinese. However, this is not the case in English, as has been demonstrated by the examples in (58-60), where the syntactic occurrence of adverbs does not coincide with the semantic scope of characterization. This distinction between English and Chinese can be brought out by contrasting the examples in (58-60) with their Chinese counterparts. First, the Chinese counterpart of (58), as shown in (61), involves the verb reduplication construction, referring to postverbal (i.e., VP-internal) modification.

- (61) Ta kai-che kai de kuai
 he operate-car operate Part. fast
 'He drove (the car) fast.'

Interestingly enough, Vendler's description of (58) pertaining to the 'event' sentence - that 'driving a car' is nothing but making a car run by some manipulations - should better be construed as a characterization of the Chinese sentence in (61) rather than that of its English counterpart in (58). Note that (61) contains a V+O compound 'kai-che' ('operate-car'). And the adverbial phrase 'kuai' ('fast'), which follows the reduplicated verb of the V+O compound, i.e., 'kai' ('operate'), restricts the range of the event referred to by the verb, that is, 'the car ran fast'. In a word, the syntactic order in (61) accords well with the semantic characterization given by Vendler.

Sentence (59), on the other hand, cannot be rendered into Chinese by a single sentence. As pointed out by Vendler, (59) had two implications, as shown in (59'); the Chinese counterparts refer to those two implications, as shown in (62):

- (62) a. Ta (hen) xiaoxin kai-che
 he very careful operate-car
 'He was very careful in driving (the car).'
- b. Ta xiaoxinyiyi de kai-che
 he carefully Part. operate-car
 'He drove (the car) in a careful manner.'

The adverbial phrases in (62a) and (62b) - 'xiaoxin' ('careful') and 'xiaoxiyi de' ('very carefully') - occur preverbally, indicating VP-external modification. Nevertheless, there is a slight difference between (62a) and (62b): the former refers to the 'execution of the act', whereas the latter refers to the 'performance of the act', that is, the action of 'driving' in both cases. One thing to note is that manner adverbials are incompatible with the postverbal position in Chinese, i.e., adverb-slot (5) in diagram (57). In other words, they cannot characterize 'Event'.

Finally, the Chinese counterpart of (60) also involves preverbal modification as in (63):

- (63) Ta hao bu fei li de kai-che
 he with no difficulty operate-car
 'He drove (the car) easily.'

In this case, the adverbial phrase 'hao bu fei li de' ('with no difficulty') characterizes the 'doing of the action', i.e., the operating of the car. This class of adverbs is referred to as 'facility' adverbs in Vendler (1984a).

The examples in (61-63) clearly show that in Chinese the syntactic ordering of adverbial modifiers reflects the semantic scope of characterization. That is, postverbal modifiers, which contain 'Event' adverbs, characterize 'Event', but preverbal modifiers, which include 'manner' and 'facility' adverbs, characterize 'Action'.

There is another class of adverbials, namely, durational adverbials, which merit our attention here in that their scope of modification is indicated explicitly in Chinese. As discussed in Chapter 3, there are two types of durational adverbials: telic versus atelic durational. The former occur with achievements and accomplishments, whereas the latter with activities, in the terminology of Vendler (1967), as the following examples in (64) illustrate:

- (64) a. John read the book in five hours. (Telic)
 b. John read the book for five hours. (Atelic)

The Chinese counterparts of (64) are shown in (65):

- (65) a. John (zai) wu-ge xiaoshi jiu ba
 John in five-cl. hours then BA
 shu kan-wan le₁
 book look-finish le₁
- b. John kan-shu kan le₁ wu-ge xiaoshi
 John look-book look le₁ five-cl hour

Note that the Chinese examples in (65) differ from their English counterparts in (64) with regard to the syntactic position of the durational adverbials. That is, the 'telic' durational adverbial '(zai) wu-ge xiaoshi' ('in five hours') occurs preverbally in (65a), but the 'atelic' durational adverbial 'wu-ge xiaoshi' ('for five hours') occurs postverbally, following the reduplicated verb 'kan' ('look (at)'), as in (65b). A question arise at this point: Why do telic durationals occur preverbally, but atelic durationals occur postverbally in Chinese? It seems to me that the different syntactic positions of these two types of durationals, as shown by the Chinese examples in (65), are closely linked to their scope of modification.

Mittwoch (1980) in this connection has expressed some doubts on the status of the 'telic' durational adverbials being treated as 'durational' adverbials as such. She points out that 'telic' durationals such as 'in five hours' focus on the shortness of the time span in which the process is completed and further adds that they "specify the outside limit within which a process takes place, the maximum period it occupies" (1980: 209). Since telic durationals focus on the shortness of the time span, this maximum period is by implication equivalent to the whole period. Thus, the true paraphrase of (64a), according to her, would be (66):

- (66) It took John five hours to read the book.

This fact is clearly reflected in the Chinese example in (65a) in that a resultative verb compound, i.e., 'kan-wan' ('look-finish') is resorted to to express the completed event. (For a more detailed discussion of this type of verb compounds, see Chapter 3 and 5 respectively.)

In terms of the semantic analysis of action sentences suggested by Vendler, 'telic' durationals like 'in five hours' in (64a) mark the period (of time) of "the undertaking of the act rather than the duration of its execution" (1984a: 305). Hence, they behave more or less like 'facility' adverbs, characterizing the 'doing of the action'. 'Atelic' durationals like 'for five hours' in (64b), on the other hand, characterize 'Event' in the sense that they serve to indicate the exact duration of the 'event', i.e., the process referred to by the verb. They are V-modifiers. As a result, 'telic' and 'atelic' durationals involve different scope of modification; however, their difference in scope of modification is not clearly indicated by the English examples in (64). In the case of the Chinese sentences, as shown in (65), the semantic scope of durational adverbials is explicitly indicated syntactically. That is, atelic durationals occur postverbally, but telic durationals occur preverbally. It is interesting to point out here that the Chinese examples in (65), to some extent, represent the semantic scope of durationals for their English counterparts in (64). This fact lends further support to the claim put forward here that in Chinese the syntactic ordering of modifiers is related to the semantic scope of modification.

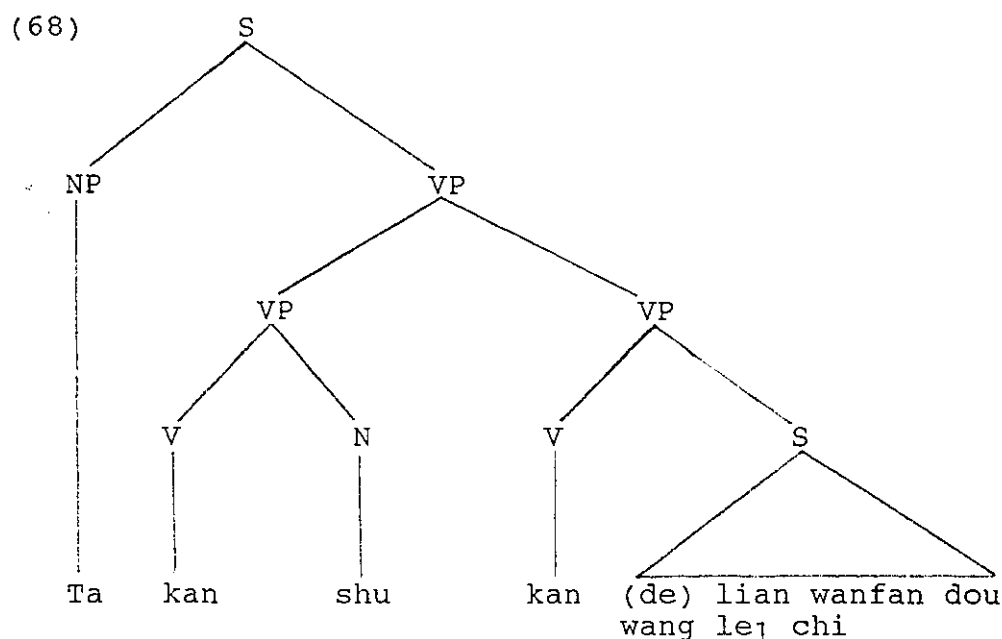
After having explicated the correlation between the syntactic position of adverbial modifiers and the semantic scope of characterization in Chinese, we now return to the issues raised earlier on the subject of verb reduplication constructions involving V+O compounds. The first issue concerns the fact that the adverbial phrases following the reduplicated verb involve such semantic interpretations as 'result, duration, direction, extent', as shown in (48). Why then are these semantic interpretations associated only with postverbal modification? The second issue concerns the semantic motivation for the reduplication of the verb in the so-called verb reduplication construction. These two issues, in fact, are interrelated.

In light of the semantic characterization of adverbials given by Vendler (1984a) and the correlation between syntactic and semantic scopes of modification in Chinese proposed here, we can provide a satisfactory answer to the issues raised above concerning verb reduplication constructions in Chinese. Notice that all the examples in (48), repeated below as (67), contain V+O compounds.

- (67) a. Ta kan-shu kan de lian wanfan dou
 he look-book look Part. even supper even
 wang le₁ chi (Result)
 forget le₁ eat
 (Lit.) 'He was so absorbed in his reading that
 he even forgot his supper.'
- b. Ta kan-shu kan de hen kuai (Extent)
 he look-book look Part. very fast
 'He reads very fast.'
- c. Ta kan-shu kan le₁ wu-ge zhongtou (Duration)
 he look-book look le₁ five hour
 'He read for five hours.'

As I pointed out in Section 4.1.1, the internal structure of V+O compounds is of an 'analytical' nature in the sense that the semantic features of each constituent combine together and form the meaning of the whole unit. For example, 'kan-shu' ('look (at)-book') ('to read') in (67a) consists of two parts: a verb, referring to the action, and its object. The object (of the compound) is usually interpreted as being incorporated into the verb, and the compound as a whole denotes an activity. On the other hand, all the adverbial phrases in (67a-c) are 'Event' adverbs. They characterize the 'event' referred to by the verb (of the compound) rather than the activity denoted by the compound itself: That is, (67a) characterizes the 'result' of his reading (the book); (67b) characterizes the 'speed' of his reading, and (67c) the 'duration' of his reading. Semantic notions like 'result, extent, and duration' are but various ways of describing or characterizing the 'event' referred to by the reduplicated verb, which serves to specify the semantic scope of modification.

To give a concrete illustration of the scope of modification indicated by 'event' adverbs, consider (67a), which can be represented roughly as follows:



Notice that the adverbial phrase 'lian wan-fan dou wang le₁ chi' ('(he) even forgot his supper') in (68) specifies the 'resultative' state of his reading rather than the activity as such. Hence, the reduplication of the verb (of the compound) is semantically motivated. The syntactic motivation for the reduplication of the verb, as mentioned in the previous section, is, in my view, a reflection of this semantic restriction.

In the foregoing, it was said that in Chinese the syntactic ordering of adverbial modifiers corresponds to their semantic scope of modification. As such, adverbial phrases characterizing 'Event' have to occur postverbally rather than preverbally. This one-to-one correspondence between the syntactic order of modifiers and the semantic scope of modification explains the reason why these different semantic interpretations involved in the adverbial phrases are associated only with postverbal modification. Preverbal modification, on the other hand, involves characterization of the V+O compound as a whole, namely, the activity, as the following examples in (69) demonstrate:

- (69) a. Ta manmande zai kan-shu
 he slowly Prog. read-book
 'He is reading slowly.'
- b. Ta hen ren-zhen de zai kan-shu
 he very seriously Prog. read-book
 '(Lit.) He engaged himself in reading
 seriously.'

The manner adverbs in (69), i.e., 'manmande' ('slowly') and 'ren-zhen de' (very seriously), characterize the performance of 'reading'. Hence, no reduplication of the verb is required in these examples.

4.3 Conclusion

In concluding this chapter, I will present one type of construction in Chinese for further illustration of the claim proposed here that the reduplication of the verb has to do with the semantic scope of modification. In addition, it serves to explain the semantic distinction between Chinese and English. The typical representative of this type of construction involves the adjective 'good' in English. For instance, sentence (70)

- (70) She is a good singer.

if used in the sense that 'she sings very well', cannot be rendered into Chinese as (71):

- (71) ??Ta shi yi-wei (hen) hao de gechangjia
 she be one-cl. very good singer

The unacceptability of (71) arises from the following facts: First, the pronominal adjectival phrase '(hen) hao de' ('(very) good'), unlike the adjective 'good' in English, refers only to 'quality/or merit', as shown in (72):

- (72) a. Ta shi (yi)-ge hao muqin
 she be one-cl. good mother
 'She is a good mother.'
- b. Ta shi yi-wei hao lüshi
 he be one-cl. good lawyer
 'He is a good lawyer.'

Second, the noun 'gechanjia' ('singer') in (71) represents a profession, and has no 'agentive' implication, as the noun 'singer' in English does. Accordingly, it can be described only by adjectives like 'famous, well-known', referring to 'achievement'.

- (73) Ta shi yi-wei you-ming de gechangjia
 she be one-cl. famous singer
 'She is a very well-known singer.'

The noun 'singer' in English differs from its Chinese equivalent 'gechangjia' in another aspect: The former is morphologically linked to the verb 'to sing' in English, whereas the latter is not morphologically linked to the V+O compound 'chang-ge' ('sing-song') in Chinese. And herein lies the semantic distinction between Chinese and English.

Instead, (70) can be rendered into Chinese as (74):[16]

- (74) Ta chang-ge chang de hen hao
 she sing-song sing Part. very good
 'She sings very well.'

(74) contains a V+O compound 'chang-ge' ('sing-song'), referring to an activity. The adverbial phrase 'hen hao' ('very well') occurs postverbally, characterizing the 'event' referred to by the reduplicated verb 'chang' ('sing'), which serves to specify the semantic scope of modification.

A question remains: How to link the interpretation of (74) in Chinese with that of (70) in English. As stated above, the implication of (70) is 'she sings well'. This fact shows that 'good' in (70) actually characterizes the extent of her activity, i.e., 'singing'. Seen in this perspective, the Chinese example in (74), to some extent, indicates the semantic representation of the English sentence in (70).[17]

In light of what we have discussed above, it seems that Chinese differs from English in two essential aspects: First, Chinese does not have the 'agentive' nouns that are morphologically derived from or linked with 'action' verbs, as English does, e.g., 'dancer, actor, pianist, reader, etc.'. Second, the prenominal adjective in a Chinese sen-

tence does not imply the notion of 'action' linked with the subject of the sentence. Thus, those agentive nouns in English that are morphologically derived from or linked with 'action' verbs, when modified by adjectives such as, e.g., 'good, fast', implying the notion of 'action' involved in a sentence, are expressible in Chinese only by resort to 'action' sentences, as clearly illustrated by the English sentence in (70) and its Chinese equivalent in (74). The reduplication of the verb in (74), on the other hand, shows that it is related to the semantic scope of modification. This piece of evidence offers further support to the claim suggested here that the reduplication of the verb in the verb reduplication construction in Chinese is semantically motivated.

Footnotes to Chapter IV

- [1] This characterization of V+O compounds in Chinese is given by S-F Huang (1984).
- [2] This type of constructions corresponds roughly to the imperfective (aorist) constructions in the Slavic languages (cf. Kabakciev, 1984).
- [3] See Chapter 2 for a more detailed discussion of the perfective aspect le_1 .
- [4] The 'object' of the V+O compounds in Chinese, on the other hand, cannot be interpreted as referring to a 'generic' NP without stretching the term. For one thing, structurally, the object of the compound represents an N rather than an NP. For another, a 'generic' NP is often defined as expressing 'kinds' of things (Carlson 1982). However, the object of the V+O compound does not refer to 'kinds' of things, as discussed.

The 'generic' NPs in Chinese are expressed in other contexts. For example, the NP in the subject position, as shown in (1), is interpreted as referring to a 'generic' expression.

- (1) a. Ma shi dongwu
 horse be animal
 'A horse is an animal./Horses are animals.'
- b. Mao xihuan zhua laoshu
 cat like catch mouse
 'Cats like to catch mice.'

- [5] Lehrer (1973), on the other hand, treats the so-called 'cognate object' verbs in English within a wider context as verbs with deletable objects. Verbs with cognate objects are included in the type of verbs with specific objects. This type of verbs "allows certain specific objects to be deleted without loss of information". For instance, in (1)

(1) Mary dances the tango badly. Can you dance?
 the deleted object is any 'dance', not necessarily the tango. However, when an object is generated other than that which is marked deletable, that object may be

pronominalized but not deleted as in (2):

(2) Mary dances the tango badly. Can you dance it?
(i.e., the tango) (Lehrer, 1973)

[6] There exist in Chinese certain verbs whose objects may, more or less, be seen as 'cognate' objects. The examples in (1) are representatives of this group:

- (1) a. ti yi-jiao
kick one-foot ('give (sb) a kick')
- b. da yi-quan
hit one-fist ('give (sb) a punch')
- c. kan yi-yan
look one-eye ('give (sb) a glance')

The objects of the examples in (1), i.e., 'yi-jiao' ('one-foot'), 'yi-quan' ('one-fist'), and 'yi-yan' ('one-eye'), repeat partially or wholly the meaning of the verbs, i.e., 'ti' ('kick'), 'da' ('hit'), and 'kan' ('see'). These objects, on the other hand, are treated as 'cognate' instruments in Teng (1975) (cf. S-F Huang, 1984).

[7] Verkuyl (1972) lists three types of verbs that normally fall under the category of object-deletion verbs in English: a) 'Perform-Verbs', which include verbs such as, e.g., 'play, sing, etc.'; b) 'Eat-Verbs', which take 'concrete' nouns and include verbs such as, e.g., 'eat, drink, smoke, etc.'; c) 'Take-Verbs', which include verbs such as, e.g., 'knit, write, build, etc'.

[8] Mittwoch (1982:119) has also mentioned another use of the determiner of 'some', which "denotes an unspecified (but delimited) quantity. This use occurs with plurals and [-Count] nouns, where it is in complementary distribution with the numeral 'one' or with the so-called indefinite articles according to whether it is stressed or not".

[9] The use of the object 'fan' (rice') with the verb 'chi' ('eat') in rendering the notion of 'eating' in Chinese, it seems to me, is due to cultural rather than semantic facts.

[10] Hale & Keyser (1985), on the other hand, have attempted an alternative treatment of this class of verbs along the lines of the GB framework. They hold that

object-deletion verbs in English lack an object only in the syntactic structure, but have an object in the lexical structure. Their analysis is based on the claim that this class of verbs in English shows the characteristic of '*non-configurationality*' in the sense that the Theta-Criterion (i.e., the condition that specifies how theta-roles are assigned) is satisfied 'internally', i.e., in the lexicon alone, under certain circumstances. They argue that the internal argument of the verb (of this class) is properly identified in the lexicon, rendering unnecessary the appearance of an NP object in the phrase structure. For instance, in the lexicon, object-deletion verbs like 'sing' will contain a clause that serves to identify the selectional restrictions on the evaluation of the 'object' variables, namely, the Y-variables in (1). In the case of the verb 'sing', a clause might read, approximately, as follows:

(1) [----, where Y qualifies as a TUNE, -----]

In a sense, (1) can be seen as a semantic definition of the verb 'sing'. When the so-called object-deletion verbs enter into the construction, they impose a rather narrow constraint on the evaluation of the object variable. And the operative mechanism on the object-deletion construction, according to them, is the substitution of a constant for the corresponding argument variable. (For further details, see Hale & Keyser, 1985.)

- [11] By 'connotation', Kaznowski (1973) refers to the semantic range of objects that can co-occur with the verb.
- [12] S-F Huang (1984), on the other hand, points out that the notion 'verb reduplication' betrays "an unmistakable bias towards this type of construction by an uncritical use of English syntax as the frame of reference (i.e., what in English is achieved by a mono-clausal construction is expressed in Chinese by the reduplication of the same verb)". He further considers that it is quite possible to "conceive of a possible world in which English syntax is believed to contain a verb deletion rule when followed by an extent or adverbial complement". Huang's

argument, to a certain extent, is justified; however, for convenience of characterization, I still retain the term 'verb reduplication' here.

- [13] S-F Huang (1984) posits the surface structure condition in Chinese as an abstract requirement restricting the complexity of the VP. The surface output condition reads as follows (1984:61):

(1) No surface structure is well-formed if it contains a sequence of the form:

Verb - C₁ - C₂

(where the verb is restricted to those verbs that are not ditransitive or cognate verbs and C refers to any constituent.)

- [14] S-F Huang (1975: 17) has also mentioned that there are three important ideas that revolve around the notion of 'action'. They are

- a) the state of mind of the actor,
- b) the carrying out or actual performance of an action, and
- c) the end result of an action.

He further points out that "characterization or explanation of an action may be given to any of these three elements and natural languages may have provisions for separately characterizing each of them or may lack syntactic devices for consistently sorting them out and characterizing them". Huang's remarks, to a certain extent, complement Vendler's (1984a) semantic treatment of adverbial modification of action sentences.

- [15] Vendler (1984a), however, mentions that the adverb 'easily' borders on ambiguity in the following sentence.

(1) He rode the horse easily.

In one sense 'easily' is opposed to 'hard', and thus modifies the action performed. In another sense, it is opposed to 'with difficulty', and thus modifies the doing of the action.

[16] There are syntactic variations of the type of sentences like (74), as the following examples in (i) show:

- (1) a. Ta de ge chang de hen hao
 she DE song sing Part. very good
 'She sings very well.'
- b. Ta ge chang de hen hao
 she song sing Part. very good
 'She sings very well.'

The sentences in (1), it seems to me, are semantically related to the verb reduplication construction in (74). (1a) and (1b) can be claimed to be derived syntactically from (74) in that the noun 'ge' ('song') is 'non-referential', and behaves just like the object of the V+O compound. (See Cheung (1976) for a diachronic description of this type of constructions in Chinese.)

[17] Vendler (1963) has mentioned that the prenominal 'good', when the noun in question is 'agentive', in fact derives from a 'deep' adverbial position. For example, he suggests that (1) semantically underlies (2):

- (1) She dances well.
 (2) She is a good dancer.

Chapter V
RESULTATIVE VERB COMPOUND CONSTRUCTIONS IN
CHINESE

5.1 Defining Characteristics

In Chapter 4 I have already dealt with one type of verb compounds, i.e., verb-object compounds. In the present chapter I will examine another type of verb compounds, i.e., resultative verb compounds (hereafter RV compounds), and specifically the aspectual and semantic issues involved in this type of verb compounds.

A resultative verb compound can be defined as consisting of two parts: The first verb indicates the kind of action involved, while the second verb indicates the result of the action expressed by the first. 'Result' is understood here in a broader sense of the word as a state after the completion of an action rather than a mere result of an action. This point is crucial to the interpretation of the semantic and aspectual properties involved in this type of verb compounds, which will be discussed in Section 5.3. To set the context for discussion, consider first the examples in (1) and (2):

- | | | | |
|-----|-----------|--------------------|--------------------|
| (1) | la-chang | 'pull-long' | ('lengthen') |
| | da-po | 'hit-fracture' | ('break') |
| | ti-si | 'kick-die' | |
| | nong-zang | 'make-dirty' | |
| (2) | kan-wan | 'look (at)-finish' | ('finish reading') |
| | zhao-dao | 'look for-reach' | ('find') |
| | ren-chu | 'identify-emerge' | ('recognize') |
| | xiang-chu | 'think-emerge' | ('think out') |

Structurally, the first element (of the compound) tends to be an action verb, whereas the second element tends to be a stative verb. The distinguishing characteristic of RV compounds is that they can be transformed into 'potential' forms by the insertion of the infix 'de' or 'bu', with 'de' adding the meaning of 'can' and 'bu' adding the meaning of 'cannot', as (3) and (4) illustrate:

- (3) a. la-de-chang
pull-can-long ('can lengthen')
- b. la-bu-chang
pull-cannot-long ('cannot lengthen')
- (4) a. ren-de-chu
identify-can-emerge ('can recognize')
- b. ren-bu-chu
identify-cannot-emerge ('cannot recognize')

But, as Cartier (1972) points out, this syntactic diagnostic for distinguishing RV compounds from other types of compound verbs - the ability to take the potential infixes 'de' and 'bu' - has been used, for the most part, out of context in that it is not always possible to convert a RV compound into a potential verb when it occurs in a sentence. For instance, an RV compound like 'nong-zang' ('make-dirty') in (1) can be changed into a potential form such as 'nong-de-zan' ('can make dirty') out of context; however, when it occurs in a sentence, the conversion is not always possible, as can be seen from the examples in (5):

- (5) a. Ta nong-zang le₁ yifu
she make-dirty le₁ clothes
'She made her clothes dirty.'
- b. *Ta nong de zang le₁ yifu
she make can dirty le₁ clothes
- c. *Ta nong bu zang le₁ yifu
she make cannot dirty le₁ clothes

The unacceptability of (5 b-c) arises from the fact that they both occur with the perfective marker 'le₁', referring to a temporally 'bounded' situation. The potential markers

'de' ('can') and 'bu' ('cannot'), on the other hand, indicate a 'potential' mode. For this reason the potential markers are incompatible with the 'perfective' marker *le*₁; yet, they can appear in sentences without the aspect markers as in (6).

- (6) a. Ta kan - de - wan zhe-ben shu
 he look at can finish this-cl. book
 'He can finish reading this book.'
- b. Ta kan - bu - wan zhe-ben shu
 he look at-cannot-finish this-cl. book
 'He cannot finish reading this book.'

The difference between the 'actual' forms in (5) and the 'potential' forms in (6) consists in the fact that in the former the result (or goal) has actually been attained, whereas in the latter the result of the action is conceived of as being possible or impossible to attain.

It should be mentioned here that the RV compounds in Chinese do not constitute a homogeneous class. All the RV compounds in (1) exhibit a 'causal' linking between the first verb and the second verb of the compound. That is to say, the 'result' referred to by the second verb springs from the action indicated by the first. For example, 'dapō' ('hit-fracture') in (1) is made up of two parts, the first indicating the action involved, namely, that of 'hitting', while the second denoting the 'resultant' state, i.e., that of 'being dead', following as a consequence of the action. On account of this 'causal' connection, RV compounds like those in (1) are treated as 'causative' verb compounds by some linguists (e.g., Teng, 1975; Li & Thompson, 1976). Li & Thompson (1976), for instance, treated this group of RV compounds as compound causatives, forming a subclass of RV compounds. By contrast, no such 'causal' linking exists between the first verb and the second verb of the compound in the examples of (2). Rather, the second verb of the compound refers only to the end-point achievement of the action indicated by the first verb. As an illustration, 'kan-wan' in (2) is composed of the active perception verb 'kan' ('look at'), denoting the process, and 'wan' ('finish'),

referring to the end-point achievement of the action. The inherent aspectual properties of this group of RV compounds have been discussed in Chapter 3, and will be further spelled out later in this chapter.

An important thing to notice about RV compounds is that the internal structure of RV compounds, just like that of V+O compounds as discussed in Chapter 4, can be claimed to be of an 'analytical' nature in the sense that the meaning of the verb compound as a whole is built up from its constituent parts. This holds for the examples in both (1) and (2). The remainder of this chapter will be devoted to the discussion of the semantic issues involved in RV compounds, to which I will return in Section 5.3.

5.2 Previous Approaches

The issues involved in RV compounds in Chinese have drawn some attention from linguists in the last two decades, and in particular among those working within the generative-transformational framework. However, most treatments found in the literature have focused mainly on the syntactic derivation of this type of verb compounds. More precisely, these approaches revolved around the question of whether RV compounds should be treated as transformationally or as lexically derived. The former view was represented by A. Hashimoto (1971), whereas the latter view was taken by Thompson (1973a). In the following I will review these two opposing hypotheses critically. Inasmuch as my major concern here is not with the syntactic treatment but with the semantic characterization of RV compounds, I will not enter into the details of these analyses.

5.2.1 A. Hashimoto's (1971) Transformational Analysis

A. Hashimoto (1971) proposed a transformational analysis for the derivation of RV compounds in Chinese. Her main purpose is to account for the irregular syntactic behaviour of two different types of RV compounds, as shown in (6) and (7):

(6) Zhangsan chi-wan fan le₁
 Zhangsan eat-empty rice le₁
 'Zhangsan finished (or ate up) the rice.'

(7) Zhangsan chi-bao le₁ fan le₂
 Zhangsan eat-full le₁ rice le₂
 'Zhangsan has eaten to his fill.'

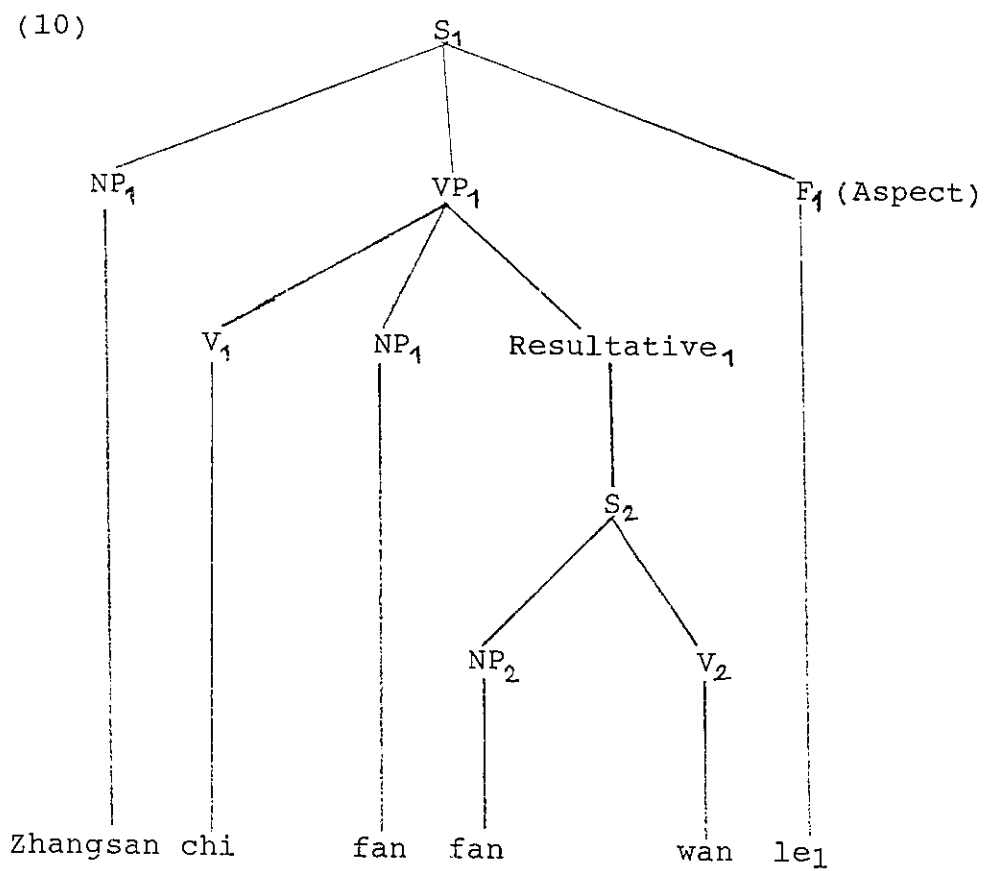
To start with, Hashimoto (1971:37) regards the resultative complement as a single verb in the surface structure but as a complement on the morphological level. In other words, the resultative complements in (6) and (7) - 'chi-wan' ('eat-empty') and 'chi-bao' ('eat-full') - are interpreted as compound verbs with the second member as a complement element. She presented the following evidence in support of her claim: For one thing, aspect markers, if present, always occur after the second member. For another, the potential markers 'de' and 'bu' modify only compound verbs and the combinations of the verbs in question by occurring between the two verbs in the surface structure.

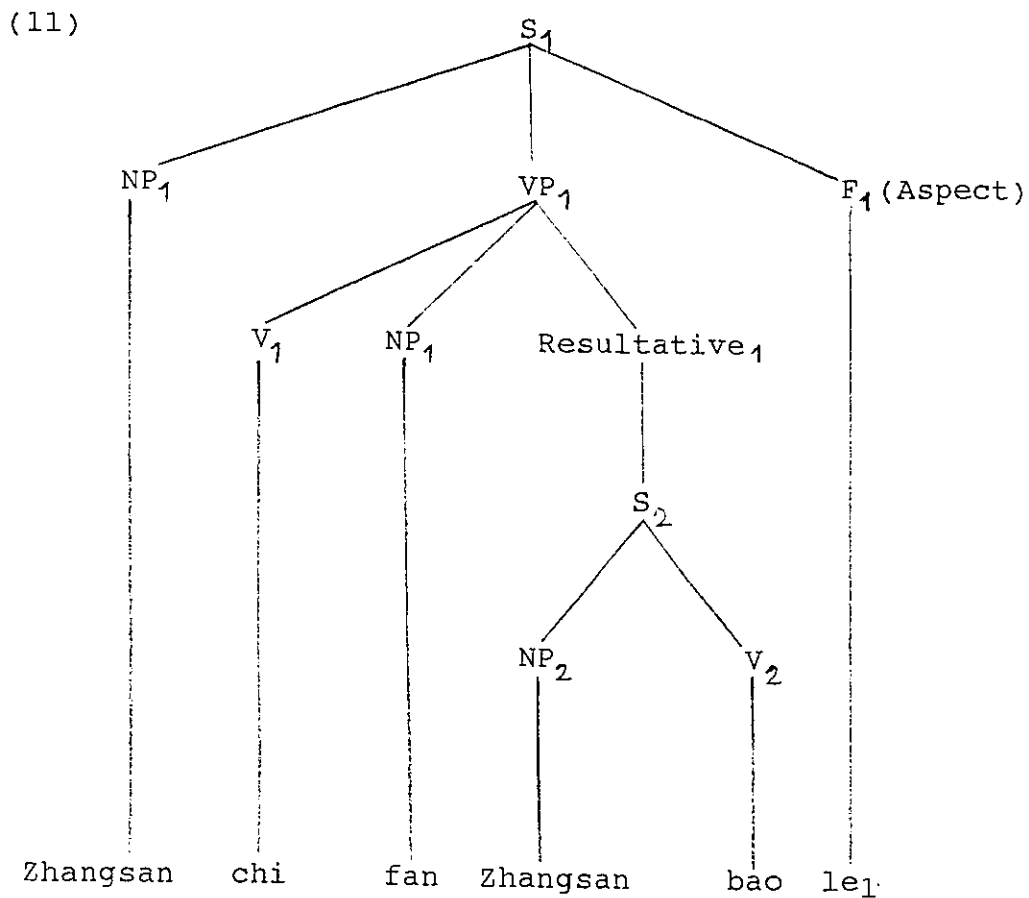
Next, Hashimoto treats the resultative verbs in (6) and (7) as being derived from embedding sentences in the deep structure. The rationale for her positing of the transformational source for RV compounds is to account for the different syntactic behaviour of RV compounds with respect to the passive construction. For instance, of the two verbs 'chi-wan' ('eat-empty') and 'chi-bao' ('eat-full'), only the former, but not the latter, can occur in the passive construction.

(8) Fan gei Zhangsan chi-wan le₁
 rice gei Zhangsan eat-empty le₁
 'The rice was eaten by Zhangsan.'

(9) *Fan gei Zhangsan chi-bao le₁
 rice gei Zhangsan eat-full le₁

Hashimoto (1971:39) posited different underlying structures for (6) and (7), which are shown in (10) and (11) respectively:





The underlying subject NP of the complement in (10) and (11), as maintained by Hashimoto, is different: That is, the subject NP of 'wan' ('finish') in (10) is 'fan' ('rice'), whereas that of 'bao' ('full') in (11) is 'Zhangsan'. In more explicit terms, the shared NP of (10), i.e., 'fan' ('rice'), is the object NP of the matrix sentence, but the shared NP of (11), i.e., 'Zhangsan', is the subject NP of the matrix sentence. This fact, she claims, tallies exactly with the condition for susceptibility to the passive transformation.[1] In light of this distinction, Hashimoto generalizes the relationship between the resultative verbs and the passive construction as follows: "Resultative verbs can occur in the passive construction only if the grammatical subject NP of the latter is identical with the subject NP of the complement sentence of the resultative construction" (1971:41).

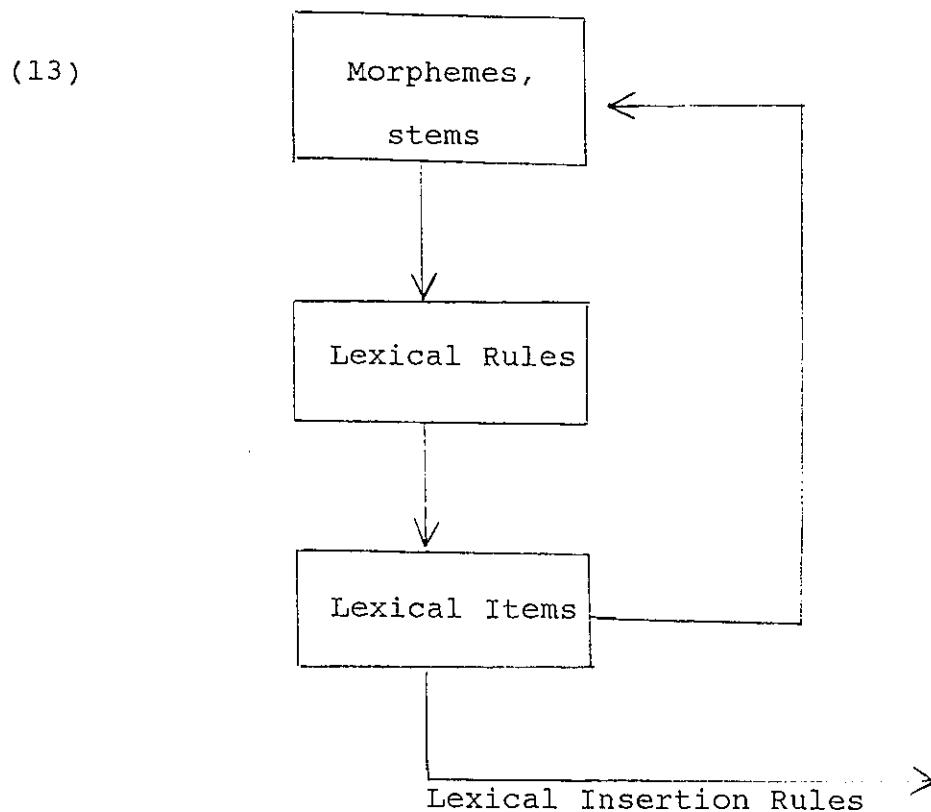
Hashimoto's (1971) transformational analysis, on the face of it, seems to be able to explain, in her own terminology, the irregular syntactic behaviour of some RV compounds. Yet, upon closer scrutiny, the transformational source for the derivation of RV compounds remains unsatisfactory in many respects. In the first place, not all RV compounds can be analysed as being derived from a two-sentence underlying structure. In most cases, the examples in (1), which show a 'causal' linking between the first verb and the second verb of the compound, can be thus interpreted. However, the examples in (2) does not fall into this category. For instance, 'zhao-dao' ('look for-obtain') in (2) cannot be taken as being derived from two sentences in the deep structure. Here, the crucial factor in the interpretation of the compound hinges completely upon the semantic features referred to by the second verb. Even if we do not take the semantic properties involved in the RV compounds into consideration, the transformational analysis is only partially successful in accounting for the derivation of RV compounds. Secondly, although Hashimoto has provided a clear distinction between 'chi-wan' ('eat-empty') and 'chi-bao' ('eat-full') in terms of different underlying structures, as shown in (10) and (11) respectively, the condition suggested by her with respect to the relationship between RV compounds and the so-called passive construction in Chinese lacks generality (cf. Thompson, 1973a). There are many RV compounds which do not occur in the passive construction. To cite an example, 'xie-wan' (write-finish') in (12) cannot occur in the passive construction.

- (12) a. Ta xie-wan le₁ xin le₂
 he write-finish le₁ letter le₂
 'He finished writing the letter.'
- b. ??Xin bei ta xie-wan le₁
 letter BEI he write-finish le₁
 'The letter was written by her.'

Because of these inadequacies, Hashimoto (1971) failed to achieve her aim in providing a satisfactory account of the RV compounds.

5.2.2 Thompson's (1973a) Lexical Analysis

Thompson (1973a), on the other hand, argued in favour of a lexical analysis of RV compounds in Chinese. That is, RV compounds are treated as morphologically complex verbs, being derived by a small set of lexical rules rather than by syntactic rules. She proposed a lexicon (for lexically related forms in Chinese) as follows (1973a:369):



One thing to note about diagram (13) is that "lexical items can recycle through the lexical rules, which are mostly optional, before they are inserted into underlying representations" (1973a:368).

Thompson suggested quite a few lexical rules for the derivation of RV compounds. The rationale for her positing of different lexical rules is to account for different types of RV compounds. Among the lexical rules there are two of them that are considered to be the most general in the sense that the process by which such RV compounds can be formed are very productive. For instance, RV compounds like those in (1) are regarded as typical examples of this type of compounds, which consist of an 'action' verb and a 'result' intransitive verb. The lexical rule for this type of RV compounds looks something like

(14)	V	+	V	----->	[V - V] RV
	Action		Intransitive		Action
e.g.	sha-si		'kill-die'		
	da-po		'hit-fracture'		
	si-po		'tear - be in pieces'		
	ku-yun		'cry-faint'		

According to this rule, given an action verb and an intransitive verb, a new action verb may be formed which includes the former followed by the latter. This new verb is a RV compound.[2]

Another point about rule (14) is that it is linked with a metatheoretical semantic generalization, which states that "any lexical 'combining' rule effects a combining of the meanings of the two input forms in the semantically most natural way". In the case of (14), Thompson claims, "the most natural relationship between an action verb and an intransitive state or action is that of causation, i.e., the action causes another action to happen or a state to exist" (1973a:369).

Thompson proposed another lexical rule to account for a class of RV compounds which consist of a 'direction' verb functioning as a 'resultative' ending, e.g., 'shanglai'

('come up'), 'xiqu' ('go down'), 'chulai' ('come out'), etc.. This class of compound verbs, on the other hand, has usually been treated by others (e.g., Chao, 1968; Cartier, 1972; Lu, 1977) as 'directional' compound verbs, the first verb of which is a motion verb, indicating the manner of the movement, whereas the second verb of which is a directional verb, referring to the direction of the movement. A few examples will suffice to illustrate this type of compound verbs.

- (15) a. zou-jinlai
walk - come in ('enter')
- b. fei-guoqu
fly-go past ('fly over there')
- c. na-chulai
bring-come out ('bring out')

This class of RV compounds is represented by the following rule suggested by Thompson (1973:371):

- $$(16) \quad \begin{array}{ccc} V & + & V \quad \text{-----} \rightarrow \\ \text{Motion} & & \text{Direction} \end{array} \quad \begin{array}{c} [V - V] \\ \text{RV} \end{array}$$

However, rule (16), according to Thompson, cannot account for RV compounds in which the 'directional' suffix does not have a literal directional meaning such as

- (17) a. xiang-chulai
think-come out ('think out')
- b. jiu-guolai
save-come past ('rescue from danger')
- c. shuo-qilai
speak-emerge ('make mention of')

As we see, the first element of the compounds in (17) is a 'non-motion' verb, i.e., 'xiang' ('think'), 'jiu' ('save'), and 'shuo' ('speak'). Thompson holds that as resultative endings these directional suffixes take on a 'metaphorical' meaning when attached to 'non-motion' verbs. And the reason why rule (16) fails to account for RV compounds like those in (17) is that the metatheoretical semantic statement, as mentioned earlier,

has nothing to say about such irregular combinations. Such RV compounds as those in (17) must simply be listed in the lexicon accordingly.

Thompson made mention of a few other lexical rules in accounting for other verbs (e.g., 'dao' ('reach'), 'wan' ('finish'), 'kai' ('open') ect.), which are used as 'resultative endings', as in (18), and she further pointed out many other types of RV compounds which, in her view, must be listed in the lexicon in that they cannot be explained by any general rule, as illustrated in (19):

- (18) a. zou-dao 'walk-reach'
 b. xie-wan 'write-finish'
 c. li-kai 'leave-separate'
- (19) a. zuo-hao 'do-finish' ('finish doing')
 b. fen-kai 'divide-separate' ('separate')
 c. kan-kai 'see-separate' ('to be optimistic
 about')
 d. wen-zhu 'ask-stop' ('stump')

Thompson's (1973a) lexical analysis of RV compounds, it seems to me, is more satisfactory than Hashimoto's (1971) transformational analysis. In other words, RV compounds are morphologically complex verbs and hence should better be treated as lexically rather than as transformationally derived. In spite of this fact, the lexical analysis put forward by Thompson (1973) is not free of problems. Her approach still falls short of providing a general, coherent semantic characterization of RV compounds in Chinese. She claimed that the class of RV compounds in Chinese is a mixed class, consisting of an open subset and a closed subset. Members of the former are specified by rules, whereas members of the latter are listed in the lexicon, being regarded as random, irregular combinations. The rationale for her listing of the so-called irregular RV compounds in the lexicon is based on the claim that the semantic nature of these compounds is unpredictable and thus cannot be accounted for by her metatheoretical

semantic generalization, which states that "any lexical combining rule effects a combining of the meanings of the two input forms in the the semantically most natural way". However, the exact nature and function of this semantic rule has not been spelled out by Thompson. For example, in her opinion, the most natural semantic interpretation of the RV compounds formed by the lexical rule in (14) is that of 'causation', viz., the action causes another action to happen or a state to exist. This interpretation is essentially correct, despite the fact that it calls for further explanation, to which I will return in the next section.

Her treatment of the class of so-called irregular RV compounds, which are listed in the lexicon and regarded as random combinations, on the other hand, leaves much to be desired. This stems mainly from the inadequacy of her metatheoretical semantic statement. The class of RV compounds that consists of 'directional' verbs as 'resultative endings', as shown in (15) and (17) respectively, is a case in point. The examples in (15) all involve 'physical' motion verbs, i.e., 'zou' ('walk'), 'fei' ('fly'), and 'na' ('bring'), while on the contrary the examples in (17) all involve 'non-motion' verbs, i.e., 'xiang' ('think'), 'jiu' ('save'), and 'shuo' ('speak'). According to Thompson, the lexical rule representing this class of RV compounds, as shown in (16), coupled with the metatheoretical semantic generalization, can only account for members of this class of RV compounds in which the 'directional' verbs as resultative endings refer only to a 'literal' directional meaning, as the examples in (15) demonstrate; nevertheless, the examples in (17), she claims, cannot be accounted for by rule (16) in conjunction with the metatheoretical semantic generalization on the grounds that all the directional verbs in (17) assume a 'metaphorical' meaning when attached to 'non-motion' verbs. As a consequence, RV compounds like those in (17) are treated as irregular combinations and must be listed in the lexicon.

Here, Thompson has missed a semantic generalization between the RV compounds in (15) and those in (17). In actual fact, there exists a semantic correlation between directional verbs used as 'resultative endings', referring to a 'literal' (i.e. directional) meaning when combined with 'physical' motion verbs, as in (15), and those used as 'resultative endings', indicating a 'metaphorical' meaning, in Thompson's terminology, when attached to 'non-motion' verbs, as in (17). The so-called 'metaphorical' meaning assumed by the directional verbs when attached to non-motion verbs actually refers to the inherent temporal nature (i.e. aktionsart) of the situation of the whole compound. That is to say, the directional verbs are used as markers of 'aktionsart'. For instance, the directional verbs in (17), repeated as (20), express a 'telic' (i.e. bounded) notion.

- (20) a. xiang-chu (lai)
 think-come out ('think out')
- b. jiu-guolai
 save-come past ('rescue from danger')
- c. shuo-qilai
 speak-emerge ('make mention of')

The directional verbs in (20), i.e., 'chulai' ('come out'), 'guolai' ('come past'), and 'qilai' ('emerge'), indicate an endpoint (of the situation designated by the verbs), here, in the sense of 'inception' of an event. Interpreted from this standpoint, the directional verbs in (20) affect the intrinsic temporal nature of a situation (referred to by the verbs). The directional verbs, in a sense, refer to a transition process, i.e., from one stage to another. In the case of 'chulai' ('come out'), it expresses the transition from the stage of 'non-existence' to that of 'existence', as can be seen from (20a); on the other hand, in the case of 'qilai' ('emerge'), it denotes the transition from the stage of 'non-appearance' to that of 'appearance', as can be seen from (20c).

Although their original meaning of concrete 'spatial' direction is lost when they are used as markers of aktionsart, these directional verbs still retain the semantic feature of 'direction' in the sense of the notion of a transition process. Accordingly, there is a semantic affinity between the 'spatial' and the 'non-spatial' uses of directional verbs. More exactly, the 'temporal' meaning (referred to by the directional verbs) originates from their spatial source. However, if we list these RV compounds in the lexicon as irregular combinations, as Thompson (1973) did, we will fail to grasp the semantic generalization involved in these compounds. In light of this semantic connection between the 'spatial' and 'non-spatial' uses of directional resultative endings, the metatheoretical semantic generalization posited by Thompson turns out to be incapable of providing a coherent semantic characterization of the class of RV compounds. Much more will be said on the subject of directional verbs being used as markers of aktionsart in Section 5.3.3.

From what we have said so far, it seems that most directional verbs can be used either as directional resultative endings, or as markers of aktionsart. An RV compound as a whole indicates a 'telic' verb content. This fact goes to show that the derivational processes have effects on the inherent temporal properties of the verbs on which they operate. By definition, derivation creates new lexemes. Hence, the intrinsic temporal properties involved in the RV compounds as a whole cannot be accounted for by the transformational analysis. This evidence lends further support to the claim that RV compounds should be taken as lexically derived.

5.3 Issues in the Semantic Analysis of RV compounds

5.3.1 Lexicalized vs Grammaticalized RV compounds

Having briefly examined the syntactic properties of RV compounds, we turn now to the issues involved in the semantic analysis of this class of compound verbs. Thus far, we have given only a rough description of RV compounds. In Section 5.1, a resultative verb compound was taken to be defined as being composed of two parts, the first verb indicating the kind of action involved, whereas the second indicating the result of the action expressed by the first. This definition as it stands is imprecise and hence calls for further elaboration. Here, the problem is due to the imprecise description of the second verb of the compound. As said, RV compounds in Chinese do not constitute a homogeneous class. In the main, they can be classed into two groups as in (1) and (2), repeated below as (21) and (22):

- | | | | |
|------|-----------|--------------------|--------------------|
| (21) | la-chang | 'pull-long' | |
| | da-po | 'hit-fracture' | |
| | ti-si | 'hit-die' | |
| | nong-zang | 'make-dirty' | |
| (22) | kan-wan | 'look (at)-finish' | ('finish reading') |
| | zhao-dao | 'look for-reach' | ('find') |
| | ren-chu | 'identify-emerge' | ('recognize') |
| | xiang-chu | 'think-emerge' | ('think out') |

The semantic structure involved in the examples of (21) differs from that involved in the examples of (22). That is, there is a 'causal' relation between the first verb and the second verb in the former, whereas no such 'causal' linking exists between the first verb and the second verb in the latter. Instead, the second verb refers to the attainment of a goal. As I see it, the crucial factor in the interpretation of the compound as a whole

hinges entirely on the semantic features referred to by the second verb (of the compound).

In Chapter 3, I suggested that RV compounds can be divided into two groups: 'lexicalized' vs 'grammaticalized' RV compounds. The essential criterion drawn upon in distinguishing these two groups of RV compounds is the semantic nature and the function of the second verb of the compound. The second verb of a 'lexicalized' RV compound retains its own 'lexical' meaning, and on top of that, the meaning of the second verb is brought into focus in the interpretation of the whole compound as such. This fact is borne out by all the examples in (21) in that the second element of these compounds retains its lexical meaning. The second verb of a 'grammaticalized' RV compound, however, has been relegated to the status of marker of 'telic' aktionsart in the sense that it affects the intrinsic temporal nature of a situation (designated by the first verb) and thus changes its 'aktionsart' from an 'atelic' (i.e. unbounded) situation to a 'telic' (i.e. bounded) situation. This is borne out by all the examples in (22).

The status of the second verb of the grammaticalized RV compounds can further be illustrated by (23). The RV compound 'zhao-dao' ('look for-reach') in (23) refers to, in Vendler's (1967) terminology, an achievement, expressing 'change of process', i.e., from the process of 'his looking for the book' to the successful outcome of it. The second element of the compound, i.e. 'dao' ('reach'), in the strict sense, has lost its 'lexical' meaning, i.e., 'reach/or arrive', (despite the fact that the 'temporal' sense it indicates stems from its original meaning). Rather, it expresses a 'telic' notion. That is, it adds the notion of an endpoint to an 'unbounded' situation (described by the first verb), which otherwise has no necessary terminus. In doing so, it affects the intrinsic temporal nature of the situation and hence alters its aktionsart from an 'unbounded' situation to a 'bounded' situation.

- (23) Ta ba shu zhao-dao le₁
 he BA book look for-reach le₁
 'He found/has found the book.'

As we said, the second verb of the RV compound indicates the result of the action expressed by the first verb. The notion of 'result' used here has to be further clarified on the grounds that the internal structure of lexical RV compounds differs slightly from that of grammaticalized RV compounds. Therefore, the notion of 'result' used in these two groups of RV compounds cannot be interpreted in the same way semantically, despite the fact that they both point to a 'telic' situation.

Among the aspectual classification of verbs put forward in Chapter 3, lexicalized RV compounds were grouped under the rubric of 'Development', referring to a transitive change of state in the sense that a resultant event arises from the performance of the action expressed by the first verb. This semantic distinction can be illustrated by the examples in (24):

- (24) a. Zhangsan ba pingzi da-po le₁
 Zhangsan BA vase hit-fracture le₁
 'Zhangsan broke the vase.'
- b. Zhangsan ba Lisi da-si le₁
 Zhangsan BA Lisi beat-die le₁
 'Zhangsan beat Lisi dead.'

The event indicated by the second verb in both (24a) and (24b) - 'the breaking of the vase' and 'the death of Lisi' - follows as a consequence of the performance of the action expressed by the first verb - 'Zhangsan's hitting' and 'Zhangsan's beating'. The internal structure of (24a-b) represents an 'action-(resultant) event' sequence, that is, an action and an event following as a result of the performance of that action.[3]

As for the 'grammaticalized' RV compounds, the notion of 'result' described by the second verb cannot be interpreted as indicating a 'resultant' event, as the second verb of lexical RV compounds does. As mentioned, the second verb of grammaticalized

RV compounds function as a marker of telic aktionsart, specifying 'change of situation'. The notion of 'change of situation', as suggested in Chapter 3, can further be divided into two types: i) change of state, and ii) change of process. The former is illustrated by (25), while the latter is illustrated by (26).

- (25) a. John xiang-chu le₁ yi-ge banfa
 John think-emerge le₁ one-cl. solution
 'John thought out a solution.'
- b. John ai-shang le₁ Mary
 John love-reach le₁ Mary
 'John fell in love with Mary.'
- (26) a. Wo kan-wan le₁ na-ben xiaoshuo
 I read-finish le₁ that-cl. novel
 'I (have) finished reading that novel.'
- b. Ta xie-hao le₁ yi-feng xin
 he write-finish le₁ one-cl. letter
 'She wrote a letter.'

The difference between the examples in (25) and those in (26) rests with the semantic nature of the first verb of the compound. As we see, the verbs in (25) are non-action verbs, indicating, in Vendler's (1967) terminology, a state. What the second verb does, when attached to the first verb, is to convert a 'state' into an 'achievement'. That is, it changes an 'unbounded' situation (designated by the first verb) into a 'bounded' situation. On the other hand, the verbs in (26) are action (or process) verbs. And what the second verb does, when attached to the first verb, is to add the point of 'terminus' to the action (denoted by the first verb). In doing so, it specifies the endpoint of the activity and thus changes it from an 'unbounded' situation to a 'bounded' situation.

There is a small set of verbs in Chinese which function as 'telic' aktionsart markers. They will be treated as 'verb-particles' here (cf. Teng, 1977). A detailed description of the semantic properties of this set of verb particles will be given in Section 5.3.3.

5.3.2 Causativity and Lexicalized RV compounds in Chinese

We now go on to examine in greater detail the semantic issues involved in the group of lexicalized RV compounds, as shown in (21), which have been briefly touched upon in the foregoing section. In the course of discussion, I will attempt to throw light on the semantic nature of the notion of causation involved in this type of RV compounds, which so far has not been fully accounted for by Chinese linguists.

In various places in the literature (e.g., Dowty, 1979; Jackendoff, 1983; Vendler, 1984a,b) different proposals have been made about the analysis of 'causation' involved in 'action' sentences. In the remainder of this section, I will undertake a detailed discussion of the semantic nature of 'causation' in general and the causal relation involved in the lexicalized RV compounds in Chinese in particular. Let us first take a close look at the hypotheses presented by these linguists.

5.3.2.1 Dowty's (1979) Bi-sentential Analysis of CAUSE

Dowty (1979) proposed a bi-sentential analysis of CAUSE to account for the relation between accomplishments and causatives. His arguments, for the most part, were borrowed from Generative Semantics. According to Dowty (1979:91), the class of verbs mentioned in Generative Semantics seems to be co-extensive with the class of accomplishments. For instance, the verb 'kill', which was analysed by McCawley (1968) as [CAUSE [BECOME [NOT [ALIVE]]]], is treated by Dowty as an accomplishment verb. On account of this correlation between causatives and accomplishments, Dowty suggested that all accomplishment verbs can be analysed as having a CAUSE operator in their logical structure.

In his aspect calculus, Dowty (1979:91) posited that all accomplishments are constructed as having the following logical structure:

(27) [X CAUSE Y], where X and Y are sentences.

However, he did not place any restrictions on the aspectual type of X and Y, but noted that, in most cases, X is a BECOME sentence or contains an activity predicate, and Y is a BECOME sentence. For example, a construction like (28)

(28) John painted a picture.

will have a logical structure something like

(29) [[John paints] CAUSE [BECOME [a picture exists]]]

One thing to note here is that the operator CAUSE is treated as a kind of two-place sentential connective rather than as a relation between individuals and propositions (McCawley, 1968).

Dowty drew upon several pieces of linguistic evidence to support his claim that CAUSE should be analyzed as a bi-sentential operator. The first one is a kind of accomplishment construction known as 'factitives' (in traditional grammar). In these constructions, an activity (or accomplishment) verb combines with an adjective and an object noun phrase to give an accomplishment in which the verb describes the causal activity (or accomplishment) and the adjective gives the result state of the direct object following as a consequence of the activity. The following are Dowty's examples, illustrating the characteristic of this type of constructions:

- (30) a. John shot him dead.
 b. John painted the house red.
 c. She hammered the metal flat.
 d. He swept the floor clean.
- (31) a. John drank himself silly.
 b. Mary read herself to sleep.
 c. He read himself hoarse.

In terms of the analysis of accomplishments mentioned above, (30d), for instance, will be represented as below:

- (32) [[He sweeps the floor] CAUSE [BECOME [the floor is clean]]]

Another class of sentences mentioned by Dowty which motivates a bi-sentential analysis of CAUSE is a subset of the verb-particle constructions. Dowty gives the following examples (1979:94):

- (33) throw NP away
 throw NP down
 throw NP aside
 throw NP in
 throw NP up
- (34) put NP away
 throw NP away
 send NP away
 drive NP away
 call NP away

The particles in (33) and (34), express the location of the direct object, which results from the activity described by the verb. Dowty (1979:94) suggested that these verb-particle constructions should not be treated as single lexical units consisting of a verb and a particle, but as 'compositional' accomplishment constructions being composed of an activity verb and a particle that expresses a result state (See also footnote 14).

It should be pointed out here that in Dowty (1979) causation is taken as a relation between two events. Furthermore, there is another issue, which he calls 'causal selection', which has to be considered in the definition of CAUSE. By 'causal selection' he refers to the fact that "natural language statements (accomplishment sentences) ordinarily single out one event as the cause of the second" (1979:106).

Inasmuch as it is not my main purpose here to pursue a logical analysis of causation, I will not enter into the particulars of Dowty's model-theoretic interpretation of CAUSE. Despite the insight and elegance of parts of Dowty's logical analysis of causation, in the following I will discuss two aspects in which his analysis is inadequate.

In the first place, Dowty's analysis of CAUSE does not hold for all accomplishment sentences. As has just been mentioned, in Dowty (1979) causation is viewed as a relation between two events. CAUSE is thus treated as a sentential operator, linking the two events. In addition, the first event is chosen as the cause of the second. This is due largely to the following facts: i) the linguistic arguments presented by Dowty were mainly drawn from Generative Semantics, and ii) his semantics of CAUSE is, in fact, a version of David Lewis' (1973) treatment of causation. Lewis analyzed the CAUSE operator in terms of counterfactuals. Dowty (1979) adopted and revised Lewis' analysis for his bi-sentential operator CAUSE, which is supposed to be used to account for causative statements in natural languages. Therefore, the sentences which are arguments of the sentential operator CAUSE refer to 'events' that have occurred (For details, see Dowty (1979:99ff)). For example, an accomplishment sentence like (28) is treated as having the logical representation as in (29), where the first event - 'John paints' - is interpreted as the cause of the second - 'a picture exists'. However, in treating this group of accomplishments (e.g., paint a picture, read a book, write a novel, etc.) as having a causal dependence between two events, Dowty (1979) has blurred the semantic distinction between the group of accomplishments and the other type of accomplishments, as represented by the examples in (30).

As we shall see in the next section, there are two notions involved in the interpretation of causation, namely, action and event. The former is performed, whereas the latter is caused. Hence, the 'causal dependence' is conceived of as a relation between

an action and an event following as a consequence of the performance of that action. Taken from this point of view, all the examples in (30) involve a 'causal dependence'; nevertheless, the group of accomplishment sentences like (28) cannot be thus interpreted in that they refer only to the endpoint achievement of the action. It is interesting in this connection to note that accomplishments in English do not constitute a homogeneous class.[4] As with RV compounds in Chinese, accomplishments in English can also be roughly divided into two groups: 'lexicalized' vs 'grammaticalized' accomplishments. The examples in (30) are represented in the former, whereas sentences like (28) and the verb-particle constructions in (33-34) are represented in the latter.

As we discussed in Chapter 3, accomplishments of the latter group in English are formed by syntactic means. That is, they involve an activity verb and a (specific) noun phrase, which indicates the terminal point of the event. Further, accomplishments in the past or perfective tenses are seen as having attained the goal. In most cases, the articulated noun phrase defines the temporal boundedness of an event. The attainment of a result in (28), however, is only implied but not explicitly indicated. The intrinsic temporal nature involved in (28) can be seen if we contrast (28) with its Chinese equivalent in (35). In Chapter 3 Chinese was characterized as having a 'non-directed' verbal content. The consequence of this is that the temporal boundedness of an event has to be overtly expressed. The Chinese equivalent of (28), as shown in (35), resorts to a 'grammaticalized' RV compound.

(35) John ba hua hua-hao le₁
 John BA picture paint-finish le₁
 'John painted a picture.' (= 28)

As we see, the second verb 'hao' ('finish') of the RV compound in (35), i.e., 'hua-hao' ('paint-finish'), serves as a marker of 'telic' aktionsart, specifying the endpoint achievement of the action (expressed by the verb).

Taken in terms of the intrinsic temporal properties involved, (28) does not differ from its Chinese counterpart in (35), except that in the case of accomplishments in English, the temporal boundedness of an event is specified by the artiled noun phrase rather than by the verb.

In light of what has been said here, this group of 'grammaticalized' accomplishments in English, exemplified by (28), cannot be treated as entailing the relation of 'causal dependence' between two events, as was done in Dowty (1979).

Secondly, Dowty's bi-sentential analysis of accomplishments in terms of the sentential operator CAUSE fails to account for the syntactic and semantic differences between the examples in (30) and those in (31). In fact, both types of constructions are termed 'factitives' by Dowty (1979), and are characterized as consisting of an activity (or accomplishment) verb, which combines with an adjective and an object noun phrase to give an accomplishment in which the verb describes the causal activity and the adjectives gives the result state of the direct object following as a consequence of the activity.

A word should be said here about Dowty's treatment of the 'factitive' constructions in English. In Dowty's view, both factitives (e.g. hammer-flat) and verb-particle combinations such as those in (33-34) are regarded as being derived by means of syntactic operations in the lexicon. That is, they are derived by 'lexical rules' that "combine expressions syntactically, rather than morphologically, so that the derived unit functions as two separate words from the point of view of subsequent syntactic operations" (1979:303). In more explicit terms, the 'factitives' such as those in (30) are seen as a kind of 'lexicalized' compound verbs, but with discontinuous constituents (cf. Bolinger, 1971).

Despite the fact that Dowty (1979) introduced lexical rules to derive the factitives in English, his bi-sentential analysis of accomplishments cannot clear up the syntactic and semantic differences between the sentences in (30) and those in (31). In fact, he failed to distinguish the differences between them. This is due largely to the rationale underlying his analysis of CAUSE, which is viewed as a relation between two events, as stated earlier. Thus, the examples in (30) and (31) are subsumed under one category, having the same logical representations. For instance, a 'factitive' construction like (30c), repeated below as (36a), will have a logical representation as in (36b).

- (36) a. John hammered the metal flat.
 b. [[John hammered the metal] CAUSE [BECOME [the metal flat]]]

A characteristic feature of this kind of construction is that the object of the 'causal' clause (i.e., the first sentence) is identical with the subject of the result-clause (i.e., the second sentence). However, Dowty contends, this need not necessarily be the case.

In

- (37) John drank himself silly.

the understood object of the verb 'drink' is not the person denoted by himself, despite the fact that 'himself' "functions as the object of the whole phrase 'drink silly' in the sense of his becoming silly was brought out by his drinking (something)" (1979:95).

Here, Dowty has failed to distinguish two types of resultative constructions in English in that (36a) differs from (37) as to syntactic and semantic structures. Syntactically, the discontinuous lexical unit 'hammer-flat' in (36a) is a 'lexicalized' compound verb, the second part of which, namely, the adjective 'flat', functions as a 'particle', being incorporated into the verb 'hammer' (cf. Bolinger, 1971). Interestingly enough, this kind of factitive constructions in English corresponds to the group of 'lexicalized' RV compounds in Chinese, except that the former is limited to a small, restricted set

of sentences, whereas the latter is productive in nature. (37), on the other hand, involves a 'resultative complement'. To put it differently, the adjective 'silly' in (37) behaves like an adverbial adjunct. Semantically, the 'lexicalized' compound verb 'hammer-flat' in (36) refers to an 'action-(resultant) event' sequence, whereas the result complement 'silly' in (37) characterizes the resulting extent of John's activity, i.e., 'drinking'.

Dowty (1979:221) has also mentioned that (36) and (37) do not have the same semantic entailment, as shown in (38) and (39) respectively.

- (38) a. John hammered the metal flat.
b. John hammered the metal.

- (39) a. John drank himself silly.
b. John drank.

According to Dowty, (38a) entails (38b), as well as entailing that 'the metal becomes flat'; (39a), on the other hand, does not entail (39b), though it does entail that an act of drinking caused John to be silly. In spite of their differences in semantic entailment, both (38) and (39) are still treated the same syntactically by Dowty. For this reason he failed to perceive the fact that the different semantic entailments in (38) and (39) result from their different internal structures.

In order to fully understand the syntactic and semantic differences involved in these two types of constructions in English, as represented in (30) and (31) respectively, let us contrast them with their Chinese counterparts. While all the examples in (30) are expressible in Chinese in terms of 'lexicalized' RV compounds, those in (31) are expressible in Chinese in terms of resultative complements. For instance, (40) is the Chinese equivalent of (30a), whereas (41) is that of (31a):

- (40) John ba ta she-si le₁
 John BA he shoot-die le₁
 'John shot him dead.' (= 30a)
- (41) John he de zuiyunyunde
 John drink Extent (Part.) silly
 'John drank himself silly.' (= 31a)

The distinction between (40) and (41) lies in the fact that they have different internal structures: the former involves a 'lexicalized' RV compound 'she-si' ('shoot-die'), the second element of which is seen as being incorporated into the verb; the latter, by contrast, involves a resultative complement 'he DE zuiyunyunde' ('drink DE silly'), the second part of which is not seen as being integrated into the verb. The particle 'DE' is used here to specify the possibility (or extent) arrived at by the activity (indicated by the verb). Hence, the result complement 'zuiyunyunde' ('silly') in (41) defines the resulting extent reached by John's activity of 'drinking', that is, 'silliness'. In a word, it functions as an 'event' adverb, describing the 'event', as discussed in Chapter 4. But this is not the case with the second part of the 'lexicalized' RV compound 'she-si' ('shoot-die') in (40) in that it cannot be seen as representing an adverbial adjunct, describing the 'extent' of the action 'she' ('shoot'). Rather, it specifies the (resultant) event arising from the execution of the action. Much more will be said on this subject in Section 5.3.2.4.

As we have shown, the syntactic and semantic differences involved in the 'lexicalized' RV compounds and resultative complements in Chinese, as in (40) and (41) respectively, are explicitly specified. However, this is not the case with the English examples. Thus, the Chinese examples in (40) and (41), to a great extent, can serve to define the internal structure and the semantic properties involved in the above two types of constructions in English. Taken from this point of view, Dowty's (1979) treatment of accomplishments in terms of the sentential operator CAUSE, which specifies the relation between two events, turns out to be incapable of accounting for the differ-

ences between these two types of constructions. It seems that a better analysis for the notion of causation will be required.

5.3.2.2 Vendler's (1984b) Analysis of Action Sentences

Vendler (1984b) put forth another analysis to account for the notion of causation involved in 'action' sentences. His analysis has already been briefly dealt with in the previous chapter when we discussed the semantic modification of adverbial adjuncts in Chinese. There are two fundamental notions in his interpretation of causation, namely, action and event. The former is done or performed, whereas the latter is caused. The reason for his distinguishing of these two notions is to clear up the relation between 'agency' and 'causation'.

The most common phenomenon encountered in the linguistic literature (e.g., Hale & Keyser, 1985; Delancey, 1984; among others) is the linking of 'agency' with 'causation' in the interpretation of causative constructions, specifically of a group of verbs in English (e.g., break, open, etc.), which display the so-called 'causative/inchoative' alternation, as the examples in (42) show:

- (42) a. The window broke.
 b. He broke the window.

The verb 'break' is usually treated as an 'inchoative' verb in (42a), but as a 'causative' verb in (42b), which is defined as involving a pair of semantic roles of 'agent-patient' (cf. Hale & Keyser, 1985). Delancey (1984) went a step further in claiming that the fundamental sense of 'agentivity' involves 'causation of events'. Here, the affinity assigned to 'agency' and 'causation' by most linguists is due mainly to their failure to distinguish the two above-mentioned notions, namely, 'action' and 'event'.

For Vendler (1984b), there exists no direct connection between 'agency' and 'causation'. In his view, 'the breaking of the window' denotes an event in (42a), but an action in (42b). To put it more precisely, the action of 'breaking the window' in (42b) is nothing but the event of 'the breaking of the window' in a 'Causative' frame, which can be represented in the following way:

(43) break glass = C (glass breaks)

(43) can further be generalized as (44):

(44) Action_i = C (Event_i)

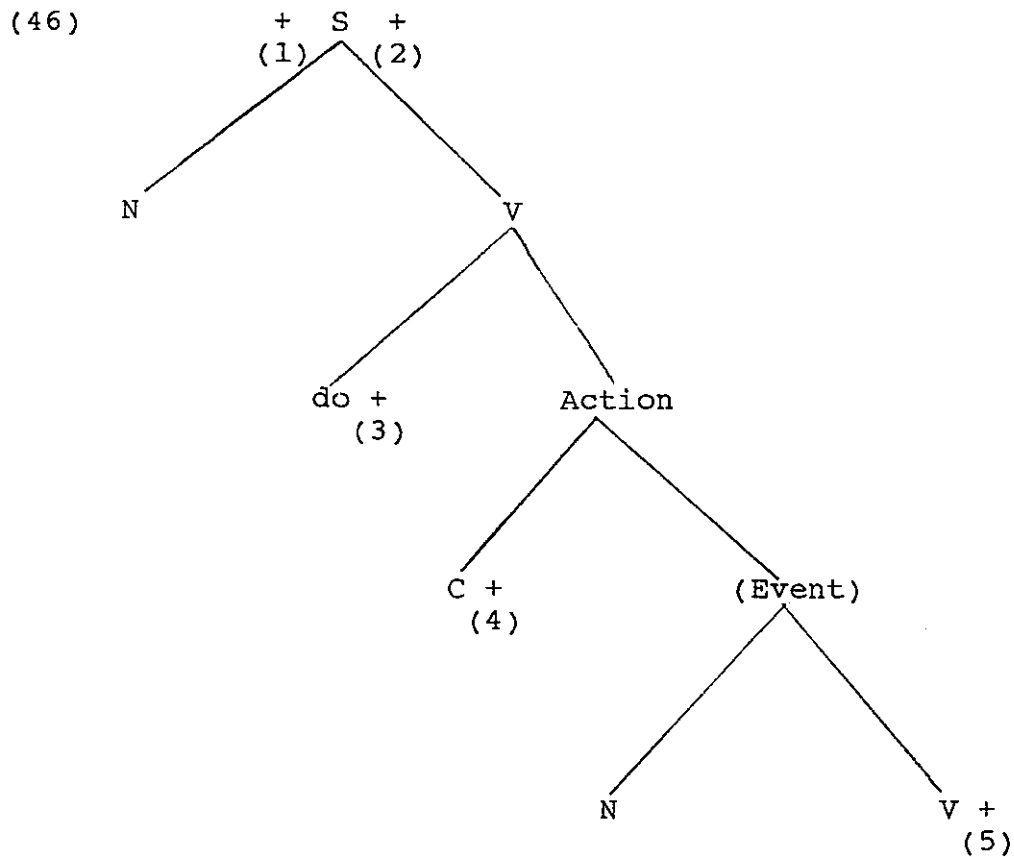
('C' marks the 'causal factor'.)

In a sense, what is done or performed, that is to say, the action itself, involves the 'causal factor'.^[5] For this reason Vendler (1984a:298) asserts that "an action is no mere event (intentionally caused by an agent), but an event in a Causative frame (done or performed by an agent)". He defines the general form of action sentences as below:

(45) (Agent) does C (Event)

According to Vendler, (45) can be conceived of as the logical form of action sentences. In short, "in the actual performance of a given action, four elements are to be distinguished: the event, the action, the doing of the action, and the agent." (1984b:376)^[6]

And Vendler further adduced adverbial adjuncts to substantiate this point. He illustrated (45) with the following tree diagram, in which the adverb-slots are marked by '+' signs (the numbers attached are mine) (1984a:300):



As noted above, there are four elements involved in the performance of an action, and each of them can be modified by adverbial adjuncts.[7]

First, the modification of the 'event' (i.e., slot (5) in (46)).

(47) He rang the bell loudly.

The characteristic feature of (47) is that the adverb 'loudly' attaches itself to 'event description'. That is, it is 'the ringing of the bell', rather than 'his ringing', that is loud.

Next, the modification of the 'action' (i.e., slot (4) in (46)).

(48) He pulled the rope hard.

In the case of (48), the adverbial 'hard' characterizes the 'action' rather than the 'event'. That is, the 'pulling of the rope' is 'hard'; the movement of it is not. In contrast to (48), 'tight' in (49) is associated with the 'event description' (i.e., 'rope becomes tight') rather than with the action description (i.e., 'pulling').

(49) He pulled the rope tight.

Finally, the modification of the doing of the action (i.e., slot (3) in (46)).

(50) He solved the problem easily.

In (50), 'easily' does not describe the action, that is, the manner in which the thing is done; instead, it describes the doing of the action, that is, in what manner the action is performed. This class of adverbs is referred to as 'facility' adverbs in Vendler (1984a).

As we saw in Chapter 4, Vendler's semantic description of adverbs in terms of his analysis of action sentences coincides with the syntactic order of adverbial modifiers in Chinese. In other words, postverbal modification in Chinese corresponds to the characterization of the event, while preverbal modification in Chinese corresponds to the description of the action and the doing of the action. Thus, the Chinese counterpart of (47), as shown in (51), involves postverbal modification; the Chinese equivalents of (48) and (50), as shown in (52) and (53) respectively, on the other hand, involve preverbal modification.

(51) Ta yao-ling yao de hen xiang
 he ring-bell ring DE very loud
 'He rang the bell loudly.' (= 47)

(52) Ta shijinde la shengzi
 he use-strength-de pull rope
 'He pulled the rope hard.' (= 48)

(53) Ta qingeryijude jiu ba wenti jiejie le₁
 he easily then BA problem solve le₁
 'He solved the problem easily.' (= 50)

The Chinese evidence presented here strongly supports Vendler's semantic analysis of action sentences. More importantly, his analysis of action sentences in terms of the notions of action and event sheds real light on the semantic nature of causation involved in the 'lexicalized' RV compounds in Chinese. In the present thesis I will adopt his analysis for the interpretation of this group of RV compounds. Further, I

will revise and extend his analysis. Much more will be said on this subject in Section 5.3.2.4 following the discussion of Jackendoff's (1983) treatment of 'action' sentences.

5.3.2.3 Jackendoff's (1983) Analysis of [ACTIONS]

Jackendoff (1983), on the other hand, has suggested an analysis of causation involved in action sentences somewhat analogous to the one proposed by Vendler (1984b), as discussed above. However, Jackendoff's (1983) analysis proceeds from a slightly different theoretical orientation, that is, from his theory of conceptual semantics.

As we have seen in Chapter 1, Jackendoff's (1983) theory of conceptual semantics takes the position that the semantic structure of a sentence is built up from a hierarchical arrangement of conceptual constituents, each of which belongs to a major ontological category such as Thing, Place, Event, State, and Manner. Conceptual constituents are realized syntactically by means of major syntactic constituents such as NP, S, VP, and AP. According to Jackendoff, the correspondence of semantic to syntactic categories is governed by 'markedness' conventions. For example, the unmarked realization of [THING] is NP; the unmarked realization of [EVENT] is S.

There are two issues about Jackendoff's (1983) analysis which are worth mentioning before moving on to his description of action sentences. In the first place, he argues against the treatment of CAUSE given by some linguists (e.g., Miller & Johnson-Laird, 1976) as a function of two events (cf. Dowty, 1979).^[8] In Jackendoff's system, CAUSE permits either a [THING] or an [EVENT] as its argument, as the examples in (54) and (55) illustrate (1983:177):

- (54) a. John made us laugh.
 b. [CAUSE ([John], [we laugh])]
 Event Thing Event
- (55) a. John's blowing bubbles made us laugh.
 b. [CAUSE ([John blow bubbles], [we laugh])]
 Event Event Event

Secondly, Jackendoff (1983) has established diagnostic tests to distinguish between [EVENTS] and [ACTIONS]: 'what happened was' is a diagnostic for [EVENTS], and 'what X did' is a diagnostic for [ACTIONS]. Jackendoff gives the following examples (1983:179-80):

- (56) 'What happened was' that
- | | | | |
|---|---|---|----------|
| { | Fred heard about the accident.
Louise received a letter. | } | [EVENTS] |
| { | *Fred loved Louise. | } | [STATE] |
- (57) 'What X did' was
- | | | | |
|---|---|---|---------------|
| { | put the book on the table.
run away. | } | [ACTIONS] |
| { | *heard about the accident.
*received a letter. | } | [non-ACTIONS] |

Jackendoff treats [ACTIONS] as a subset of sentences that express [EVENTS]. Based on the diagnostic test for [ACTIONS], he proposed the well-formedness rule (or rule of conceptual reanalysis), as shown in (58), to account for the semantic characteristics of action sentences (1983:180):

- (58) [F (X_i, Y_j, Z_k ...)] <----->
 Event
- [[ACTOR]_i, [F (i, F_j, Z_k, ...)]]
 Event X Action

Jackendoff further places conceptual conditions on what can count as an [ACTOR], and what can count as an [ACTION]. As to the conditions on [ACTOR], he does not

provide a clear-cut answer, and only suggests that an [ACTOR] "must display a certain capacity for autonomy". However, he does spell out the conditions on [ACTION]. First, when the variable of an [ACTION] is bound, the result must be an [EVENT]. In his view, this condition has already been incorporated into (58). Second, the semantic role of the variable position in an [ACTION] is limited to 'agent' and 'theme' (but not to 'goal'). On top of these conditions, Jackendoff also posits a 'correspondence rule', whose function is to relate the constituent VP to the [ACTION] constituent in the conceptual structure.

According to Jackendoff (1983:181), his account of [ACTION] requires no special lexical markings of verbs as 'action' verbs. Instead, "this information is encoded in the general conditions on the nature of [ACTION], in the relation of [ACTIONS] to [EVENTS], and in the correspondence rule that relates VPs to [ACTIONS]". Thus, a particular VP will be construed as an [ACTION] only if all these conditions are met.

As an illustration of Jackendoff's rule of conceptual reanalysis, a construction like

(59) John broke the window.

will have a conceptual structure something like

(60) [[ACTOR]_i, [CAUSE (i, [the window break])]]
 John
 Event Action Event

Jackendoff (1983:181) has also called attention to the class of, in his terminology, 'willful' or 'intentional' actions, which is seen as a subclass of actions. For instance, (59) is ambiguous in that the 'action' involved can be construed as 'intentional' or 'unintentional'. In the former sense, 'John' performs the action as a result of his own will, whereas in the latter sense, he is acting more or less like an inanimate subject. According to Jackendoff, this ambiguity can be expressed by the presence or absence of a marker 'WILLFUL' in the semantic structure of the sentence.

A problem arises at this point. How should this marker be attached to the semantic structure? Should it be attached to the [ACTOR] or to the [ACTION]? In Jackendoff's view, the marker ought to be attached to the [ACTION] on grounds that the Grammatical Constraint suggests that the semantic notion of 'WILLFULNESS' is a feature of an [ACTION], not of an [ACTOR]. This point can be seen by the fact that syntactic expressions of 'WILLFULNESS' like 'deliberately' or 'on purpose' are normally attached to the VP, but not to the subject, as the following examples illustrate:

- (61) a. What John did was break the window
{deliberately.}
 {on purpose.}
 b. Breaking windows {deliberately} is punishable
 by death. {on purpose}

While Jackendoff (1983) is correct in claiming that the semantic notion of 'willfulness' should be associated with the [ACTION] rather than with the [ACTOR], he still fails to explicate the semantic scope of modification of this type of adverbial adjuncts such as 'deliberately' and 'on purpose' when used in action sentences. This point can be seen from the examples in (62).

- (62) a. John broke the window deliberately.
 b. John deliberately broke the window.

The adverbial adjunct 'deliberately' will be treated as the same in the (a-b) sentences of (60) if analyzed in terms of Jackendoff's conceptual constituent [ACTION]. That is to say, it is attached to the [ACTION] in both sentences. However, upon closer examination, this is not quite accurate in that (62a) differs from (62b) as to the semantic scope of modification. In the case of (62a), 'deliberately' describes, in the terminology of Vendler (1984b), the action, i.e., the manner in which the thing is done. Hence, the action of 'breaking the window' is deliberate. In the case of (62b), 'deliberately'

describes, in the terminology of Vendler (1984b), the doing of the action, i.e., in what manner the action is performed. Hence, the performing of the action of 'breaking the window' is deliberate.

The problem with Jackendoff's analysis of [ACTION] lies in his correspondence rule that relates the syntactic constituent VP to the [ACTION] constituent in the conceptual structure. As a result, his semantic constituent [ACTION] can only account for (62a), in which the adverbial adjunct describes the action. It cannot account for (62b), in which the adverbial adjunct describes the doing of the action rather than the action as such.[9] In view of this fact, Jackendoff's semantic category [ACTION] needs to be revised. I will return to this point in the next section.

5.3.2.4 'Lexicalized' RV Compounds in Chinese

After having dealt with Vendler's (1984b) and Jackendoff's (1983) treatments of causation involved in action sentences, we now return to the 'lexicalized' RV compounds in Chinese.

It has generally been observed by most Chinese linguists (e.g., Lu, 1977; Teng, 1975) that 'lexicalized' RV compounds in Chinese involve a 'cause-result' relationship between the first verb and the second verb of the compound. However, when it comes to the question of how the notion of causation involved is to be explained, they all fail to come up with a satisfactory answer.

Y-S Cheung (1976) in this connection attempted to account for this type of RV compounds, which he called 'causative constructions', from a diachronic point of view. He claimed that the causative construction is derived historically from a conjoined sentence in which "the verb of the first conjunct is responsible for the result of an action represented by the causative verb in the second conjunct on the recipient" (1976:237). A construction like

- (63) Fa bai Zhao jiang Ni (Shiji)
 attack defeat Zhao general Ni
 'Attacked (and) defeated General Ni of Zhao.'

for example, has been treated by Cheung as transformationally derived. In his view, the verb 'bai' ('defeat') in (63), though glossed as 'to defeat', is actually a lexicalization of two predicates, namely, 'CAUSE' and 'lose'. 'Fa' ('to attack') is the cause of General Ni's defeat, and 'bai' is the result of the first action. 'Fa-bai' ('attack and defeat') together is a verb-complement compound, the second element of which is virtually a main verb. He added that "in the development of the compound causative, there is another constraint on the second verb that many Chinese historical syntacticians have overlooked. That is, although the first verb is the cause responsible for whatever change of state that happens to the recipient, the semantic element of causation is not inherent in it, but is a higher predicate of the second verb instead" (op. cit.,:239).

As far as I can see, it is a mistake on Cheung's (1976) part to interpret the second verb of the compound as a 'causative' verb, which is lexically decomposed into two parts. For example, 'bai' in (63) is decomposed into two parts, i.e., 'CAUSE' and 'lose'. As a result, there are two 'causes' in (63), with one attributable to the first verb, and the other attributable to the second verb. This shortcoming of Cheung's (1976) analysis stems largely from his misinterpretation of the semantic nature of causation. In actual fact, the second verb 'bai' ('defeat') of the compound 'fa-bai' ('attack-defeat') in (63) involves no 'cause' at all; on the contrary, it is 'caused' in that it indicates an event, i.e., 'the defeat of General Ni of Zhao', following as a consequence of the action, i.e., 'attacking'.

Even if Cheung (1976) is correct in his claim that this type of compounds is derived from a conjoined sentence, his interpretation of the relation of 'causal dependence' involved in (63) still leaves much to be desired. Cheung (1976: 241) contends

that (63) should not be paraphrased simply as a conjoined sentence being composed of 'fa Zhao jiang Ni' ('attack General Ni of Zhao') and 'Zhao jiang Ni bai' ('General Ni of Zhao loses'). Rather, it should be interpreted as 'fa Zhao jiang Ni' ('attack General Ni of Zhao'), and 'Zhe-yang shi ta bai' ('that causes him to lose') in which 'shi' ('to cause') is a higher predicate. But, as I see it, this paraphrase given by Cheung (1976) is unjustifiable in that 'shi' ('cause/make') is, in the terminology of Vendler (1975), a verb of 'efficacy' and thus cannot be taken as a higher predicate of the second verb 'bai' in (63), which means 'suffer a defeat'.^[10] Granted that (63) is construed as being derived from a conjoined sentence, the 'causal relation' between the first conjunct and the second conjunct should be construed as follows:

(64) 'The attacking' caused 'the defeat of General Ni of Zhao'.

The second conjunct in (64), which refers to an event, depends on the first conjunct, which indicates a fact. Therefore, it accounts for an event by means of a fact.

It is important to mention here that the internal structure of this type of RV compounds at the earlier stage such as 'fa-bai' ('attack-defeat') in (63) does not differ from that of the 'lexicalized' RV compounds in Modern Chinese such as, e.g., 'ti-si' ('kick-die'), 'shao-shang' ('burn-injured'). Thus, (63), when rendered into Modern Chinese, still resorts to an RV compound, as shown in (65):

(65) Da-bai le₁ Zhao-guo de Ni jiangjun
 strike-defeat le₁ Zhao-state Poss. Ni general
 'To defeat general Ni of Zhao.'

Notice that the internal structure of the compound 'da-bai' ('strike-defeat') in (65) is the same as that of 'fa-bai' ('attack-defeat') in (63).

In light of what has been said above, Cheung's (1976) claim that the semantic elements of causation should be construed as a higher predicate of the second verb (of the compound) cannot be maintained.

In this respect Vendler's (1984b) semantic analysis of action sentences, as stated above, throws a considerable amount of light on the 'causal relation' involved in the lexicalized RV compounds in Chinese. Recall that fundamental to Vendler's interpretation of causation are two notions, namely, action and event. The former is performed or done, whereas the latter is caused. Further, it is the performance of the action that involves the 'causal factor'.

As we have seen from the general form of action sentences in (45) suggested by Vendler (1984b), repeated below as (66), there are four elements to be distinguished in the performance of a given action: the event, the action, the doing of the action, and the agent.

(66) (Agent) does C (Event)

'C' marks the 'causal factor.'

It is of interest in this connection to point out that the semantic notions used by Vendler (1984b) - action and event - for the analysis of action sentences are more applicable to the 'lexicalized' RV compounds in Chinese than to the English accomplishment sentences. This is due primarily to the fact that the internal structure of the lexicalized RV compounds is of a 'compositional' nature in the sense that the meaning of the compound as a whole is built up from its constituent parts.

Syntactically, a lexicalized RV compound consists of an 'action/task' verb and an 'achievement' verb, with the former being used to assert the performance of the 'task' activity, while the latter is used to specify the event following as a consequence of the performance of that task activity. The characteristic feature of this group of RV compounds is that both the action and the event are overtly represented in the syntactic structure. Hence, there exists a one-to-one correspondence between syntactic and semantic structures. On the other hand, this is not the case in regard to the accom-

plishment sentences in English. For example, in the class of accomplishment (or causative) verbs such as 'break' in (59), i.e., 'John broke the window', the notion of action is only implied but not overtly expressed. By contrast, 'da-po' ('strike-break') in (67), the Chinese counterpart of 'break', specifies overtly both the action and the event.

- (67) John ba chuangzi da-po le₁
 John BA window strike-break le₁
 'John broke the window.' (= 59)

Other examples of this group of RV compounds are

- (68) a. ti-si 'kick-die'
 b. shao-shang 'burn-injured'
 c. nong-duan 'make-broken'

The internal structure of these examples tallies exactly with the logical form of action sentences suggested by Vendler (1984b), as shown in (66). To put it briefly, they display an 'action-(resultant) event' sequence semantically.

At this point a problem arises. That is, how is the 'causal relation' involved in the above examples to be elucidated? As mentioned, the 'causal factor' in relation to the event springs from the performance of the action. Given the explicit interrelation between the first verb and the second verb involved in the RV compounds in Chinese, the 'causal factor' in question indicates nothing more than the 'interlinking' of the action with the resultant event. Taken in this sense, the 'causal relation' between the first verb and the second verb of the RV compound can be accounted for.

In addition, this description of the semantic nature of causation can further explain the underlying reason of the claim made by Vendler (1984b) that 'action' is performed, whereas 'event' is caused. As a matter of fact, 'action' and 'event' indicate nothing more than the initial and final joints of this linking relationship.[11]

In Section 5.3.2.3 we mentioned in passing that Jackendoff's (1983) analysis of causation involved in action sentences parallels the one proposed by Vendler (1984b). It should be recalled that crucially involved in both analyses are the semantic notions of action and event. Jackendoff's (1983) conceptual analysis of [ACTION] does not differ in essential respects from Vendler's (1984b) semantic analysis of action sentences. This can be seen if we compare the general form of action sentences suggested by Vendler in (45) with the rule of conceptual reanalysis proposed by Jackendoff in (58). The similarities between the two are such that the semantic notions involved can be translatable into one other.

In spite of this fact, what sets Jackendoff's (1983) system apart from Vendler's (1984b) approach is the theoretical orientation. As noted in the previous section, Jackendoff's treatment of [ACTIONS] proceeds from his theory of conceptual semantics, which takes the position that the semantic structure of a sentence is built up from a hierarchical arrangement of conceptual constituents, which are realized syntactically by means of major syntactic constituents. Thus, Jackendoff's approach is more linguistically oriented. By contrast, Vendler's (1984b) analysis of action sentences is more philosophically than linguistically oriented because his major concern was to untangle the intricate relationship between agency and causation.

Since my main purpose in this chapter is to give a semantic analysis of causation involved in the lexicalized RV compounds in Chinese, I will attempt to integrate Vendler's (1984b) analysis with Jackendoff's treatment of action sentences. For a start, we have to do away with the discrepancies between these two analyses.

As noted above, in Vendler's analysis there are four elements involved in the actual performance of an action, namely, the event, the action, the doing of the action, and the agent. Among these four elements, the notion of agent is of a questionable

nature in that such notions as 'agent', 'theme', and 'experiencer' belong to the level of factual knowledge rather than to the level of linguistic description. Vendler (1984b) was aware of this fact when he asserted that actions are performed by agents; however, he still kept this term. Jackendoff (1983) in this connection has suggested a semantically more neutral term [ACTOR], which refers to a participant in an action sentence. As I see it, the neutral term [ACTOR] is preferable to the term 'agent' in that the former, but not the latter, can cover all the syntactic subjects in the examples of (69).

- (69) a. John broke the window.
 b. The rock broke the window.
 c. The explosion broke the window.

Recall that in Jackendoff's (1983) analysis the semantic notion of 'willfulness' is treated as a feature of an [ACTION] rather than that of an [ACTOR]. Interpreted in this way, all the syntactic subjects in (69) can be accounted for. Given the inadequacy of the term 'agent', we will replace it here with the semantically neutral term 'actor'.

Another discrepancy between these two analyses lies in the fact that in Jackendoff's treatment the conceptual constituent [ACTION] is construed as a single unit, which is linked by a correspondence rule with the syntactic constituent VP, whereas in Vendler's approach the semantic category 'action' is construed as being analyzable into two integral parts, i.e., the action and the doing of the action.

As we pointed out in the previous section, Jackendoff's treatment of [ACTION] as a single unit failed to account for the different semantic scopes of modification in action sentences that involve the class of manner adverbials like 'deliberately', as shown in (62). This fact shows that Vendler's (1984b) analysis of the semantic category of action as representing two parts, i.e., the action and the doing of the action, is justifiable. This point is further strengthened by the following Chinese examples:

- (70) a. Ta ba huaping guyide da-po le₁
 he BA vase deliberately strike-break le₁
 'He broke the vase deliberately.'
- b. Ta guyide ba huaping da-po le₁
 he deliberately BA vase strike-break le₁
 'He deliberately broke the vase.'
- (71) a. Zhangsan ba Lisi henhende ti-si le₁
 Zhangsan BA Lisi savagely kick-die le₁
 'Zhangsan kicked Lisi dead savagely.'
- b. Zhangsan henhende ba Lisi ti-si le₁
 Zhangsan savagely BA Lisi kick-die le₁
 'Zhangsan kicked Lisi dead savagely.'

As can be seen from the above examples, the manner adverbials in (70) and (71) - 'guyide' ('deliberately') and 'henhende' ('savagely') - can appear either inside or outside the 'BA-complement'. When the manner adverbial appears inside the 'BA-Complement', as in (70a-71a), it describes the action, i.e., the manner in which the thing is done. In the case of (70a), his action of 'striking' is deliberate; in the case of (71a), Zhangsan's action of 'kicking' is savage. On the other hand, when the manner adverbial appears outside the 'BA-Complement', as in (70b-71b), it describes the doing of the action, i.e., in what manner the action is performed. In the case of (70b), the performing of the action of 'striking' is deliberate; in the case of (71b), the performing of the action of 'kicking' is savage.

An important thing to notice about the Chinese examples in (70) and (71) is the 'analytical' nature of the 'lexicalized' RV compounds. Semantically, the manner adverbials in (70) and (71), i.e., 'guyide' ('deliberately') and 'henhende' ('savagely'), characterize, in the strict sense, the first part of the compound, i.e., the task activity, rather than the second part of the compound, i.e., the resultant event. Syntactically, when the manner adverbial appears inside the 'BA-Complement', it takes the VP as its syntactic scope of modification, as in (70a-71a); however, when it occurs outside the 'BA-Complement', it takes the 'predicate' rather than the VP as its syntactic scope of modi-

fication. In short, there exists a one-to-one correspondence between syntactic and semantic scopes of modification in (70) and (71).

The Chinese evidence presented above lends further support to Vendler's (1984b) treatment of the semantic category of action. For this reason Jackendoff's semantic category [ACTION] has to be revised so as to accommodate the two above-mentioned integral elements suggested by Vendler, i.e., the action and the doing of the action. In other words, Jackendoff's correspondence rule that relates the syntactic constituent VP to the [ACTION] constituent in the conceptual structure should be extended to cover the syntactic category 'Predicate'.

On the whole, we may claim that an adequate description of the semantic nature of causation involved in action sentences ought to include the following four elements: the events, the action, the doing of the action, and the actor. On the other hand, the internal structure of the 'lexicalized' RV compounds in Chinese can be fully accounted for in terms of these four elements. For example, a construction like

- (72) Zhangsan ba huaping da-po le₁
 Zhangsan BA vase strike-break le₁
 'Zhangsan broke the vase.'

will have a semantic structure something like

- (73) [[ACTOR]_i [striking C(i, [the vase break])]]
 Zhangsan
 Event Action Event
 'C': 'the causal factor' (or 'cause')

The structure in (73), in a sense, is a synthesis of Vendler's (1984b) analysis of action sentences and Jackendoff's (1983) treatment of [ACTION].

One thing to note about the internal structure of the RV compounds in Chinese, as shown in (73), is that the 'action', i.e., 'striking', is explicitly indicated in both syntactic and semantic structures. On the other hand, the 'action' is not overtly indicated in the

English counterpart, as can be seen from the gloss of (72). Viewed in this way, the internal structure of the 'lexicalized' RV compounds in Chinese can be taken as the semantic representation of their equivalents in English.

Another issue concerning the 'lexicalized' RV compounds in Chinese merits mention here. That is, this class of RV compounds bears some resemblance to the resultative complements. We touched briefly on this topic when we discussed Dowty's (1979) treatment of CAUSE. First, consider the following examples:

- (74) a. Zhangsan ba Lisi ti-si le₁
 Zhangsan BA Lisi kick-die le₁
 'Zhangsan kicked Lisi dead.'
- b. Zhangsan ti Lisi ti de ta si le₁
 Zhangsan kick Lisi kick Part. he die le₁
 'Zhangsan kick Lisi to death.'
- (75) a. Zhangsan ba men guan-jin le₁
 Zhangsan BA door close-tight le₁
 'Zhangsan shut the door tight.'
- b. Zhangsan ba men guan de hen jin
 Zhangsan BA door close Part. very tight
 'Zhangsan shut the door very tight.'

The distinction between (74a-75a) and (74b-75b) lies in the fact that they have different internal structures. The former involve 'lexicalized' RV compounds, i.e., 'ti-si' ('kick-die') and 'guan-jin' ('close-tight') respectively, whereas the latter involve 'result complement phrases', i.e., 'ti DE ta si le₁' ('kick DE he die') and 'guan DE hen jin' ('shut DE very tight') respectively. Syntactically, an RV compound consists of two parts, the second verb of which is seen as being incorporated into the first verb. For instance, the second verb 'jin' ('tight') of 'guan-jin' ('shut-tight') in (75a) is taken as an integral part of the compound itself. However, the result complement 'hen jin' ('very tight') in (75b) cannot be construed as being integrated into the verb 'guan' ('shut').

It is important to note here that the particle 'DE' in (74b-75b) plays a pivotal role in the interpretation of the result complement in relation to the verb. The particle 'DE' is used here to define the 'extent' arrived at by the action (denoted by the verb).[12] And the result complement functions as, in the terminology of Vendler (1984b), an 'event adverb', describing the 'event' (designated by the verb). For instance, the result complement 'henjin' ('very tight') in (75b) characterizes the event, i.e., 'Zhangsan's shutting of the door'. That is, 'Zhangsan's shutting of the door' is such that 'the door is very tight'. Nevertheless, the second part 'jin' ('tight') of the 'lexicalized' RV compound 'guan-jin' ('close-tight') in (75a), cannot be seen as representing an adverbial adjunct, characterizing the 'extent' of the action 'guan' ('shut') on grounds that the internal structure of the RV compound displays an 'action-(resultant) event' sequence. To put it precisely, the second verb indicates the event following as a consequence of the performance of the action. Hence, (75a) means that the event - 'the door got tight' - results from the action - 'Zhangsan's shutting'.

This semantic distinction between RV compounds and result complement phrases can further be illustrated by the examples in (74). S-F Huang (1974:354) attempted to account for the differences between (74a) and (74b). He claimed that (74a) differs from (74b) in two respects semantically: i) the act of kicking in (74b) is obviously purposive, whereas that of (74a) is non-committal, and ii) the sense of repeated kicking is present in (74b), but absent from (74a).

The above observations made by S-F Huang (1974) are, by and large, correct; however, he still failed to explain the underlying reason that is held responsible for the semantic distinction involved in these two types of constructions. In light of the analysis proposed here, the semantic differences between (74a) and (74b) follow from their different internal structures. It should be noted that 'ti-si' ('kick-die') in (74a) is a 'lexi-

calized' RV compound, indicating an 'action-event' sequence. But this is not the case with (74b), where the result complement 'ta si le₁' ('he died') functions as an adverbial adjunct, characterizing the 'extent' of the activity performed by Zhangsan, i.e., his kicking. Taken in this way, a repeated, purposive action of kicking is plausible in (74b) but not in (74a), which refers only to an 'action-(resultant) event' sequence.

On the basis of what we have said, we conclude that fundamental to the analysis of the 'causal relation' involved in the 'lexicalized' RV compounds in Chinese are two notions, namely, action and event. And the notion of 'causal dependence' indicates nothing more than the interlinking of the action with the event that arises from the performance of that action.

5.3.3 Verb-Particles as Markers of Telic Aktionsart

This section will be concerned, among other things, with the semantic issues involved in the 'grammaticalized' RV compounds in Chinese. As we mentioned in Section 5.3.1, the characteristic feature of this group of RV compounds is that the second verb of the compound functions as a marker of 'telic' aktionsart in the sense that it adds the concept of an endpoint to an 'unbounded' situation (represented by the first verb), which otherwise has no necessary terminus. In doing so, it affects the intrinsic temporal nature of the situation and hence alters its aktionsart from an 'unbounded' situation to a 'bounded' situation.

In Chinese there exists a small set of verbs which function as markers of telic aktionsart. This set of verbs will be treated as 'verb-particles' here. The salient feature of the verb-particles can be seen from the following examples:

- (76) Zhangsan ba nei-ben xiaoshuo kan-wan le₁
 Zhangsan BA that-cl. novel read-finish le₁
 'Zhangsan finished reading that novel.'
- (77) Zhangsan xiang-chu le₁ yi-ge banfa
 Zhangsan think-come out le₁ one-cl. solution
 'Zhangsan thought out a solution.'

On the whole, the second verb of the compound in (76) and (77) expresses a 'telic' notion. That is, both 'wan' ('finish') in (76) and 'chu' ('come out') in (77) add the concept of an endpoint to the 'unbounded' situation described by the first verb, namely, 'kan' ('read') and 'xiang' ('think') respectively.

The verb-particle 'wan' ('finish'), however, differs from 'chu' ('come out') in the way in which the concept of an endpoint is expressed. The former refers to a thorough completion of an action and hence adds an 'overt' endpoint to that action, whereas the latter indicates a transition process, viz., from the stage of 'non-existence' to that of 'existence' in terms of the inception of an event, and hence adds only a 'covert' endpoint to that action. In fact, the particles 'wan' ('finish') and 'chu' ('come out') are representatives of two subgroups of verb-particles in Chinese. The particle 'wan' belongs to the 'non-directional' verb particles, while the particle 'chu' belongs to the 'directional' verb particles. The distinction between these two groups lies in the fact that the 'directional' verb particles are derived from direction verbs which, when functioning as verb-particles, have lost much of the concrete 'spatial' meaning. What the directional verb particles show is a 'transition process', which can be interpreted, conceptually, as a feature of 'direction'. For this reason there exists a linking between the concrete spatial use and the temporal use of direction verbs. Hence, the presence or absence of the feature of 'direction' in these two groups of verb particles contributes to the way in which the concept of an endpoint is expressed.

objects such as 'shuo-hua' ('talk-utterance'), 'xie-zi' ('write-word'), and 'chang-guo' ('sing-song'), where 'utterance', 'word', and 'song' do not qualify the activities specified in the associated verbs, but rather specify the logical sequences of such activities. He further adduced evidence to support his claim of the overlapping relationship between a verb and its particle. One piece of evidence cited by him is that the deletion of the particle does not affect any change in either grammaticality or the meaning of the sentence, as the following examples illustrate:

(80) Ta ba dayi tuo-(diao) le₁
 he BA overcoat remove-(away) le₁
 'He took off his overcoat.'

(81) Tamen yijing ba men guan-(shang) le₁
 they already BA door shut-(move up) le₁
 'They have already closed the door.'

Teng, on the other hand, took issue with Thompson's (1973a) treatment of resultative verbs that involve the verb particles in (78) and (79), as mentioned in Section 5.2.2. In Thompson's analysis, resultative verb compounds like those in (78) and (79) are listed in the lexicon on grounds that the semantic properties of these compounds are unpredictable. Teng (1977), however, contended that the semantic properties shown by the verb particles are systematic and predictable, and further claimed that all the verb particles in (78) and (79) involve the movement of a 'theme'.

There are two essential notions involved in Teng's analysis of the above two groups of particles in Chinese, namely, location and movement. And the semantic properties of the particles are specified in terms of various movements of a 'theme', which "undergoes a temporal, spatial, or status displacement between the initial point 'source' and the terminal point 'goal'". [13] Teng (1977:7) provided a description of the verb particles in (78) and (79) by means of the following semantic fields.

(i) Contact

- a) Shang ('move up'):

The theme comes into contact with a target, the goal, in a situation of non-movement.
- b) Dao ('reach'):

The theme comes into contact with the goal in a situation of movement.

(ii) Separation

- a) Xia ('move down'):

The theme is separated from the source and comes into the speaker's or the subject's realm.
- b) Diao ('away'):

The theme is separated from the source and disappears from the speaker's or the subject's realm.
- c) Kai ('separate'):

The theme is disentangled from the source and leaves the speaker or the subject.
- d) Zou ('away, off'):

The theme is separated from the source and the agent accompanies the theme.

(iii) Emergence

- a) Qi ('emerge'):

The theme surfaces or appears in the speaker's or the subject's realm.

(iv) Immobility

- a) Zhu ('stop'):

The theme is made immobile from an actual or potential movement.

Among Chinese linguists, Teng (1977), as far as I know, has provided the most exhaustive study of the semantic properties of the verb particles in Chinese. Despite the insight and elegance of part of Teng's approach, I will raise two respects in which his analysis, in my opinion, is inadequate. In the first place, Teng's description of verb particles as the overlapping specification with the main verbs is inaccurate. He equated the relationship between a verb and its verb particle with that between a verb and

its cognate objects. In other words, verb-particles constitute a semantic extension of their associated main verbs. As we argued in Chapter 4, Teng's interpretation of the so-called 'cognate' objects in Chinese is untenable in that he failed to see the semantic dependency between the verb and its object in the verb-object compounds. On similar grounds, Teng (1977) failed to see the internal structure between the first verb and the (second) verb-particle of the grammaticalized RV compounds. This shortcoming of his analysis stems chiefly from the fact that he failed to notice that the verb-particle of the RV compound functions as a marker of telic aktionsart.

The examples cited by Teng, as shown in (80) and (81), as evidence in support of his argument that the verb-particles can be deleted in some sentences, require further clarification. One thing to note about the verbs in (80) and (81) - 'tuo' ('remove') and 'guan' ('shut') - is that they refer to a 'punctual' action. Thus, when they are used without verb-particles, i.e., 'diao' ('away') and 'shang' ('move up') respectively, they indicate a 'punctual' occurrence (or event). However, when they combine with the verb-particles, the 'punctual' occurrences denoted by the verbs are turned into an 'achievement', in the terminology of Vendler (1967), in the sense that a concept of an endpoint has been added to the verb. Interpreted in the way, the presence or absence of verb-particles in (80) and (81) is partly responsible for the difference of the intrinsic temporal nature involved.

Secondly, Teng's analysis of the verb-particles in terms of the movement of a theme fails to account for the semantic properties of the verb-particles. For instance, his description of the verb-particle 'shang' ('move up') by means of the movement of a theme can explicate the examples in (82), where the contact between the 'theme' and the 'goal' can be established.

- (82) a. Ta ba dayi chuan-shang le₁
 he BA overcoat put on-move up le₁
 'He put on the overcoat.'
- b. Ta ba men guan-shang le₁
 he BA door shut-move up le₁
 'He closed the door.'

Teng's analysis, for the most part, works with 'motion' verbs that involve physical movement. However, it fails when the verbs do not entail physical movement. For example, Teng treats the sentences in (83) as exceptions:

- (83) a. Ta ai-shang le₁ yi-ge guafu
 he love-move up le₁ one-cl. widow
 'He fell in love with a widow.'
- b. Ta kan-shang le₁ yi-ge guafu
 he see-move up le₁ one-cl. widow
 'He has an eyes on/ a liking for a widow.'

In Teng's view, the widow (i.e., the object) in (83a-b) is the goal, and the theme is 'affection' or 'intention'.

But, as far as I can see, Teng's analysis is untenable in that he failed to recognize the connection between the sentences in (82) and those in (83). As we shall see in Section 5.3.3.3, the particle 'shang' ('move up') belongs to a subclass of directional verb particles, where the concept of endpoint is interpreted by means of the two opposite poles of a vertical plane. In conceptual terms, the particle 'shang' ('move up') regards the 'highest point' of the vertical plane as the concept of an endpoint. That is, the attainment of a goal is such that the motion (denoted by the first verb) is seen as having reached the ultimate point of the vertical plane, and thus having come into contact with the terminus, psychologically.

Another thing to notice about the examples in (83) is that the verbs - 'ai' ('love') and 'kan' ('see') - indicate a 'state'. And the function of the verb-particle 'shang' ('move up'), when added to these verbs, is to convert a 'state' into an 'achievement'.

Thus, both the sentences in (82) and those in (83) refer to a 'telic' situation in light of their intrinsic temporal nature. Even if the sentences in (83) are to be analyzed in terms of semantic roles, as were done in Teng (1977), the 'widow' (i.e., object) is still to be seen as 'theme' rather than as 'goal' on grounds that the object (i.e., widow) is moving, in an abstract sense, toward the subject (i.e., he), who has set his activity of 'loving' in motion.

Given the above inadequacies, Teng's analysis of the verb-particles in terms of the various movements of a theme has achieved only a limited success. In my view, verb particles mainly function as markers of 'telic' aktionsart, adding the concept of an endpoint to a situation and hence altering its aktionsart from an 'unbounded' situation to a 'bounded' situation.

5.3.3.1 Non-Directional Verb-Particles

As we have shown in the previous section, what sets the directional apart from the non-directional verb particles is the way in which the concept of an endpoint is specified. Although directional verb particles have lost much of their concrete, spatial meaning, they still display the feature of 'direction' in the sense of 'transition process'. On the other hand, non-directional verb particles do not possess the feature of 'direction'. In spite of this fact, both directional and non-directional verb particles indicate the notion of resultant condition.

Bolinger (1971:85) in this connection has characterized the semantic nature of the particles in English in terms of the notion of resultant condition. He claimed that "the particle must contain two features, one of motion-through-location, the other of terminus or result".[14] These two features can also be used to characterize the verb-particles in Chinese, both directional and non-directional.

The salient characteristic of the non-directional verb particles is that the concept of an endpoint is 'overtly' articulated. This is due to the fact that non-directional verb particles, unlike their directional counterparts, lack the semantic feature of 'direction', and thus the attainment of a goal has to be directly or indirectly indicated. The non-directional verb particles take different forms in the expression of the concept of an endpoint, which, in the main, can be generalized as follows:

- i) the concept of an endpoint in the sense of thorough completion (or termination) of an action (or event);
- ii) the concept of an endpoint in the sense of the notion of terminus, (which refers to the achievement of a goal);
- iii) the concept of an endpoint in the sense of the point of severance of an action, (which points to the attainment of a goal).

In what follows, I will deal with the verb particles which fall into the above categories.

(i) Thorough Completion (or Termination) of an Event

The verb particles 'wan' ('finish') and 'hao' ('completed, ready') are two most common particles which refer to a thorough completion of an action. These two particles were discussed by Thompson (1973a) in her analysis of resultative compound verbs in Chinese. The combinations with the particle 'wan' ('finish') are treated as derived by a lexical rule, whereas the combinations with the particle 'hao' ('completed') are listed in the lexicon on grounds that the semantic properties of the compounds cannot be predicted from those of their constituents. In my view, it is a mistake on Thompson's part to treat the combinations with the verb-particle 'hao' ('completed') as being listed in the lexicon in that the meaning of the particles 'wan' ('finished') and 'hao' ('completed') is quite straightforward and predictable. That is, they add an endpoint to the first verb of the compound by referring to the termination of an event, as the following examples illustrate:

- (84) a. Ta ba xin xie-wan le₁
 he BA letter write-finish le₁
 'He finished writing the letter.'
- b. Ta ba fan chi-wan le₁
 he BA rice eat-finish le₁
 'He ate (up) the rice.'
- (85) a. Ta ba fangzi gai-hao le₁
 he BA house build-completed le₁
 'He finished building the house.'
- b. Ta ba biao ge tian-hao le₁
 he BA form fill-completed le₁
 'He filled out a form.'

Notice that the verbs that occur with the particles 'wan' ('finish') and 'hao' ('completed') are 'activity' verbs. Hence, the termination of an event displayed by these two particles refers to 'change of process'. In fact, these two particles are interchangeable in most cases.

(ii) *The Notion of Terminus*

Included in this subgroup of verb particles are 'zhu' ('stop'), 'zhao' ('obtain, reach'), and 'dao' ('reach'). However, these three particles call for clarification. Basically, they all indicate the notion of terminus in the sense that the action (or event) has reached a certain point, which can be conceived of as the endpoint, and from which the achievement of a goal is inferred.

a) The particle 'zhu' ('stop')

The verb particle 'zhu' ('stop, stay') refers to the discontinuation of an action at a certain point, which is interpreted as the terminus, in both physical and non-physical senses. It is from this basic meaning that 'zhu' expresses the 'telic' notion. This point can be illustrated by the examples in (86):

- (86) a. Chuangzi ba yangguang dang-zhu le₁
 window BA sun light block-stop le₁
 'The window blocked the sun.'
- b. Wo ji-zhu le₁ ta de mingzi
 I retain-stop le₁ he Poss. name
 'I bore his name in mind.'

On the other hand, the notion of an endpoint denoted by 'zhu' can be seen as bringing an action (or event) to a halt (or standstill), as shown in (87):

- (87) Wo ba ta wen-zhu le₁
 I BA he ask-stop le₁
 'I stumped him with my question.'

b) The particle 'zhao' ('obtain')

The basic function of the particle 'zhao' is derived from its lexical meaning 'obtain, achieve'. As a marker of 'telic' aktionsart, 'zhao' refers to the attainment of a result, which is then regarded as the endpoint of the action, as the examples in (88) demonstrate:

- (88) a. Wo ba yaoshi zhao-zhao le₁
 I BA key look for-obtain le₁
 'I have found the key.'
- b. Wo ba wenti cai-zhao le₁
 I BA question guess-obtain le₁
 'I have unraveled the problem.'

c) The particle 'dao' ('reach')

The basic function of the particle 'dao' is derived from its lexical meaning 'reach, stretch out as far as'. By implication, it specifies the contact of an action with the terminus, from which a successful outcome is inferred. For example, 'zhao-dao' in (89) shows a 'change of process', that is, from the process of 'his looking for a job' to the successful outcome of it.

- (89) Ta zhao-dao le₁ yi-fen gongzuo
 he look for-reach le₁ one-cl. work
 'He has found a job.'

Other combinations with the particle 'dao' are shown in (90):

- (90) a. Ta mai-dao le₁ yi-zhong xin yao
 he buy-reach le₁ one-cl. new drug
 'He has bought a new drug.'
- b. Ta shuo-dao le₁ wo de xin
 he receive-reach le₁ I Poss. letter
 'He has received my letter.'

(iii) The Notion of the Point of Severance of an Action

The verb particles which fall into this semantic category are 'kai' ('separate'), 'zou' ('away, off'), and 'diao' ('away'). These three particles take the point of severance (or separation) of an action as the notion of an endpoint, from which the achievement of a result is inferred. One characteristic feature denoted by these three particles is that a gap is created after the point of separation, namely, before and after the performance of the action. Therefore, they refer to different resultative implications on account of their different lexical meanings.

Within the framework suggested by Teng (1977), as stated above, these three verb particles were treated in terms of the semantic notion 'separation'. That is, the 'theme' is interpreted as being separated from the 'source'. In most cases, Teng's analysis works with those sentences in which the 'theme' can be established, that is, with those sentences in which the physical 'motion' verbs are involved. However, when other types of verbs are involved, his analysis becomes shaky in that these particles function mainly as markers of aktionsart.

a) The verb-particle 'kai' ('separate')

The basic function of this particle is derived from its verb counterpart, which means 'separate, split'. Thus, 'kai', when added to the verb, defines the point of separation of the action, and by implication, signifies the achievement of a goal. This fact can be demonstrated by the following examples:

- (91) a. da-kai chuanzi
 make-open window 'open the window'
- b. zhang-kai zui
 stretch-open lip 'open the mouth'
- c. xiang-kai yi-dian
 worry-separate one bit 'to be more optimistic'

Teng (:977:13) has observed that several combinations with the particle 'kai' express the notion of 'inception', as in (92).

- (92) a. shuo-kai
 speak-separate 'talk away'
- b. nao-kai
 excite-separate 'get out of hand'
- c. zhan-kai
 extend-separate 'spread, initiate'

He held that his spatial notion of 'separation' can be extended in terms of the temporal dimension to indicate the meaning of 'inception'. But Teng did not explain in what way his semantic notion of 'separation' is connected with the temporal meaning of inception in general, and in what way his semantic role 'theme' is applicable to the combinations with the particle 'kai' in (92) in particular.

Two points about the compounds in (92) need to be mentioned here. First, the 'deictic' motion verb 'lai' ('come') can occur with the particle 'kai' ('separate') without changing the intrinsic temporal nature of the RV compounds in (92). As we will see in the next section, the 'deictic' motion verbs 'lai' ('come') in Chinese can function as a marker of 'aktionsart', and in most cases, combine with 'directional' verb particles such

as 'shang' ('move up') and 'xia' ('move down'). It is chiefly concerned with the inception of an event that is relevant to the present moment. And the inceptive stage of an event is conceived of as the termination of the action. Seen in this perspective, it refers to a 'bounded' situation. Second, as mentioned above, the particle 'kai' ('separate') indicates the point of separation of an action, which is regarded as the endpoint of the action, from which the achievement of a result is inferred. The resultative state after the point of separation of the action specified by the particle 'kai' may be relevant to the present. This is exactly the case with the examples in (92). Hence, the notion of 'inception' indicated by the particle 'kai', as observed by Teng (1977), is nothing but the present relevance of the resultative state of the action.

b) The particle 'diao' ('away, off')

The verb counterpart of the particle 'diao' has the following meanings:

- a) 'remove' ;
- b) 'separate' ;
- c) 'lose, fall' ;
- d) 'depart' .

The notion of the point of severance of an action indicated by the particle 'diao' is essentially derived from the above meanings. And the point of separation is understood as the notion of an endpoint, from which the achievement of a goal is inferred. Because of its various lexical meanings, the combinations with the particle 'diao' can be divided into two groups, as shown in (93) and (94) respectively.

- (93) a. mai-diao
sell-separate 'dispose of'
- b. gai-diao (huai xiguan)
correct-remove bad habit
'get rid of bad habits'
- c. xi-diao
wash-remove 'wash away'
- (94) a. si-diao
die-depart 'pass away'
- b. tao-diao
escape-depart 'escape away'
- c. pao-diao
run-depart 'run away'

The examples in (93) are set apart from those in (94) by the fact that the verbs in (93) are 'activity' verbs, whereas those in (94) are 'punctual' verbs.

Teng (1977) has observed the semantic difference between 'kai' ('separate') and 'diao' ('away') in such sentences as those in

- (95) a. Yisheng ba jiao ge-kai
doctor BA leg cut-open
'The doctor cut the leg open.'
- b. Yisheng ba jiao ge-diao
doctor BA leg cut-remove
'The doctor cut the leg off.'

Teng maintained that of the above two sentences only the object 'leg' in (95a) can be interpreted as 'theme'. The one in (95b), on the other hand, is treated as 'property' by him. The difference between (95a) and (95b), in his view, is that the former is operated on the 'leg' (i.e., the theme), while the latter is disposed of a property.

Teng's argument, it seems to me, is quite arbitrary. The reason for such a treatment is due to the fact that the object 'leg' in (95b) does not fit in with his interpretation of verb-particles in terms of movement of a theme. For my part, I hold that the object in both (95a) and (95b) ought to be treated as 'theme', if analyzed in terms of

thematic roles. This fact further shows that verb-particles should better be construed as markers of aktionsart.

c) The particle 'zou' ('away')

The basic function of the particle 'zou' ('away') is derived from its verb counterpart, which means 'go away', as in

- (96) Ta zou le₁
 he go away le₁
 'He left.'

The particle 'zou', when attached to the first verb of the compound, takes the point of separation of the action (denoted by the verb) as the notion of an endpoint, from which the attainment of a goal is deduced. This can be seen from the examples in (97):

- (97) a. Ta ba wo de zhaoxiangji tou-zou le₁
 he BA I Poss. camera steal-away le₁
 'He walked off with my camera.'
- b. Ta ba wo de qian pian-tou le₁
 he BA I Poss. money cheat-away le₁
 'He cheated me out of my money.'

5.3.3.2 Motion Verbs 'lai' ('come') and 'qu' ('go') and Aspectuality

Before moving on to the discussion of the directional verb particles, we first look into the 'aktionsart' nature of the motion verbs 'lai' ('come') and 'qu' ('go') in Chinese, which relate to the analysis of the directional verb particles. As a general rule, the directional verb particles can combine with these two motion verbs. However, most Chinese linguists have thus far failed to notice the 'telic' notion indicated by the motion verbs 'lai' and 'qu' in Chinese.

The motion verbs 'come' and 'go' in Chinese, however, do not give rise to 'tense-aspect' markers, but to markers of aktionsart.[16] In particular, the 'deictic' motion verbs 'lai' ('come') and 'qu' ('go'), when combined with the directional verb-particles, express the intrinsic temporal meaning (i.e., aktionsart) of the beginning of a new situation.

The motion verbs 'lai' and 'qu' originally express the meaning of spatial motion, as the following examples show:

- (100) a. Ta lai Jianada
 he come Canada
 'He comes to Canada.'
- b. Ta qu Jianada
 he go Canada
 'He goes to Canada.'

They can also be used as 'directional' motion verbs, as in (101):

- (101) a. Xiao yanzi fei-lai wo-jia
 small swallow fly-come my-home
 'The swallows fly towards my home.'
- b. Xiao yanzi fei-qu wo-jia
 small swallow fly-go my-home
 'The swallows fly to my home.'

Thus, 'lai' and 'qu' are 'deictic' in nature. The manner in which 'deictic' motion verbs, whether 'lai' ('come') or 'qu' ('go'), are used rests mainly on the speaker's point of view regarding the situation.

The 'aktionsart' nature of these two verbs is closely related to their original uses as 'deictic' motion verbs. For instance, 'lai' ('come') is used for a motion towards the place where the speaker is, and 'qu' ('go') for a motion away from the speaker. This use of 'lai' and 'qu' can be seen from the examples in (100) and (101). The 'spatial' meanings of 'lai' and 'qu' play a pivotal role in the interpretation of their 'aktionsart' functions. When they are used for such purposes, they have lost their original meaning

of spatial motion. However, they still retain the feature of 'direction'. For example, 'lai' ('come') expresses the meaning of a transition process, which is perceived, in psychological terms, to be towards the speaker. The consequence of this is that the process is mainly concerned with a gradual transition from the stage of 'nothing' to that of 'something', or simply from one stage to another. Furthermore, it is typically concerned with the inception of an event that is presently relevant or the development of an event up to a specific focal point of time from which the event is viewed. On the other hand, when 'qu' ('go') is used, it indicates the meaning of a transition process beyond or parallel to the point from which the speaker is supposed to be viewing the event. As in the case of 'lai' ('come'), the transition process designated by 'qu' ('go') is also concerned with the inceptive stage of an event or the development of an event from one stage to another. In most cases, with respect to one and the same situation, either 'lai' ('come') or 'qu' ('go') can be used depending on the speaker's viewpoint, as the following examples illustrate:

- (102) a. Ta cong wu litou pao-chulai
 he from house inside run-come out
 'He ran out of the house.'
- b. Ta cong wu litou pao-chuqu
 he from house inside run-go out
 'He ran away from the house.'

This 'deictic' use of 'lai' ('come') and 'qu' ('go') can be represented graphically as follows:

- (103) a. V + (verb particles) 'lai' ('come')
- |-----> Speaker
- b. V + (verb particles) 'qu' ('go')
- Speaker |----->

It is essential to point out that 'lai' ('come') differs slightly from 'qu' ('go') as to the way in which the concept of an endpoint is added to a situation. As noted above, the verb

'qu' ('go') signifies a motion away from the speaker, as shown in (103b). Thus, when 'qu' is used to describe the initial stage of transition towards the termination of an event, the normal implication is that the situation in question eventually arrives at the termination. For this reason, 'qu' ('go') is often thought of in connection with the 'continuative' interpretation (cf. S-F Huang, 1977). By contrast, the verb 'lai' ('come') refers to a motion towards the place where the speaker is, as shown in (103a). Thus, when 'lai' is used to describe the inception of an event, the place where the speaker is (or, the speaker's realm), for the most part, serves as the termination of the event, and by implication, the achievement of a goal. In addition, the concept of an endpoint indicated by 'lai' ('come') with respect to the inceptive stage of an event can be taken as the development of an event (or a state) up to a specific focal point of time from which the event is viewed or as presently relevant. This contrast between 'lai' and 'qu' can be seen from the examples in (104):

- (104) a. Wo ba shu mai-xialai le₁
 I BA book buy-come down le₁
 'I have bought the book.'
- b. Women yiding yao ba zhe-xiang gongzuo
 we must want BA this-cl. work
 gao-xiaqu
 do -go down
 'We have to carry out this work to the full.'

Finally, it is interesting to point out here that 'lai' ('come') and 'qu' ('go'), when added to the verb-particle 'guo' ('pass'), involve different interpretations: when 'lai' is attached to 'guo', it indicates an entry into a normal (or better) state; when 'qu' is added to 'guo', it indicates a departure from a normal state, and thus has an undesirable connotation (cf. Teng, 1977; S-F Huang, 1977). This semantic contrast between 'lai' ('come') and 'qu' ('go') can be illustrated by the examples in (105) and (106) respectively:

- (105) a. Tā xing-guolai le₁
 he wake up-come past le₁
 'He recovered consciousness.'
- b. Yisheng ba ta jiu-guolai le₁
 doctor BA he save-come past le₁
 'The doctor has saved him from danger.'
- c. Ta yijing ba huai xiguan gai-guolai le₁
 he already BA bad habit change-come past le₁
 'He has already got rid of his bad habits.'
- (106) a. Ta hunmi-guoqu le₁
 he pass out-go past le₁
 'He lost consciousness.'
- b. Ta si-guoqu le₁
 he die-go past le₁
 'He passed away.'

Note that this use of the combinations 'guolai' ('come past') and 'guoqu' ('go past') occurs only with 'achievement' verbs, in the terminology of Vendler (1967), in that they refer to 'change of state'. All the verbs in (105) and (106) belong to the class of achievement verbs.[17]

As we said earlier, psychologically, 'lai' ('come') expresses the meaning of a transition process which is perceived to be towards the speaker, whereas 'qu' ('go') expresses the meaning of a transition process which is perceived to be away from or beyond the speaker. This fact shows that the transition process towards the speaker or away from the speaker, to some extent, can be seen as being transferred to the construal of an entry into a normal state or a departure from a normal state. Viewed in this way, the correlation between 'lai' ('come') and 'entry into a normal state', and 'qu' ('go') and 'departure from a normal state', as manifested by the examples in (105) and (106), can be accounted for.

5.3.3.3 Directional Verb-Particles

Having dealt with the motion verbs 'lai' ('come') and 'qu' ('go'), we turn now to the directional verb particles. As we have discussed, the directional verb particles have lost much of their 'concrete' spatial meaning; however, they still express the meaning of 'transition process'. The characteristic feature of the directional verb particles is that the concept of an endpoint is not 'overtly' indicated. This is due to the fact that these verb particles express a transition of an event from one stage to another.

On the whole, the forms assumed by the directional verb particles in the expression of the concept of an endpoint can be generalized as follows:

- i) the concept of an endpoint in the sense of the two opposite poles of a vertical plane;
- ii) the concept of an endpoint in the sense of inception of an event.

In what follows I will discuss the particles which fall into these two categories.

(i) The Two Opposite Poles of a Vertical Plane

- a) The particle 'shang' ('move up')

Represented in this subclass of directional verb particles are 'shang' ('move up') and 'xia' ('move down').

Within the framework suggested by Teng (1977), as discussed previously, the directional verb particle 'shang' ('move up') was treated in terms of the semantic notion 'contact'. The basic meaning of this particle, according to him, is derived from its verb counterpart, as the sentences in (107) show:

- (107) a. Tamen shang xuexiao qu
 they go school
 'They go to school.'
- b. Tamen dou shang daxue
 they all go university
 'They all go to university.'

In Teng's view, the contact between the 'theme' (i.e., they) and the goal (i.e., 'school' and 'university' respectively) is established in (107). However, Teng argued that 'shang', when functioning as a verb particle, lacks the notion of 'movement'. Despite this fact, he still treated the objects of the sentences in (108) as 'theme'.

- (108) a. Ta ba dayi chuan-shang le₁
 he BA overcoat put on - up le₁
 'He put on the overcoat.'
- b. Ta ba men guan-shang le₁
 he BA door close-up le₁
 'He closed the door.'

In my opinion, Teng's analysis of the verb particle 'shang' is inconsistent, and sometimes contradictory. For one thing, he does not clarify how the notion of 'contact' between the 'theme' and the 'goal' in the sentences of (107) and those of (108) is to be established. For another, he has to treat such sentences as those in (109) as exceptions in that the object in (109 a-b), in his view, is the 'goal', not the 'theme'.

- (109) a. John ai-shang le₁ Mary
 John love-up le₁ Mary
 'John fell in love with Mary.'
- b. Ta xue-shang le₁ yi-men shouyi
 he study-up le₁ one-cl. trade
 'He has learned a trade.'

This deficiency of Teng's analysis, it seems to me, stems chiefly from his interpretation of the verb particles by means of the movement of a theme. If the 'theme' in a sentence cannot be established, then the only way out is to treat it as an exception. However, by doing so, Teng has failed to notice the fact that the verb particle 'shang' functions as a marker of 'telic' aktionsart in the sentences of (108) and (109). The function of the particle 'shang' is to add an endpoint to the first verb (of the compound).

The basic function of the particle 'shang' is derived from its directional verb counterpart, which means 'move up', as in 'shang lou' ('to go upstairs'), contrary to Teng (1977). In conceptual terms, the particle 'shang' takes the 'top' (or 'highest point') of a

vertical plane to be defined as the concept of an endpoint. In other words, the achievement of a goal is such that the action (or process) indicated by the verb is seen as having reached the highest point of the vertical plane and thus having come into contact with the terminus, psychologically. All the examples in (108) and (109) can be accounted for in terms of this characterization of the particle 'shang' ('move up') in that all of them refer to the attainment of a result. The RV compounds in (109) call for elaboration. The verb 'ai' ('love') in (109a) refers to a 'state'; however, when the particle 'shang' ('move up') is added, it is changed into an 'achievement'. Hence, 'ai-shang' ('fall in love with') is an achievement verb, indicating a change of state (See Chapter 3 for a discussion of the aspectual classification of verbs in Chinese). The same is true of 'xue-shang' ('learn') in (109b), which also refers to an achievement, indicating a change of process, i.e., from the activity of 'learning' to the successful outcome of it - the complete mastery of a trade.

In the following examples the particle 'shang' ('move up') shows that the action has reached a certain aim (or objective), which is taken as the attainment of a goal.

- (110) a. Tamen zhu-shang le₁ xin fangzi
 they live-up le₁ new house

(Lit.) 'They have achieved their goal, that is, they can afford a new house.'

- b. Dianxiji, dianbianxiang, tamenjia dou
 television refrigerator they all
 mai-shang le₁
 buy-up le₁

(Lit.) 'They have attained their goal, that is, they can afford a television set and a refrigerator.'

These sentences cannot be accounted for by means of the movement of a theme, as suggested by Teng (1977).

- b) The particle 'xia' ('move down')

The basic function of this particle is derived from its directional verb counterpart, which means 'go (or move) down', as in

- (111) a. xia-lou 'go downstairs'
 b. xia-shan 'go downhill'

In contrast to the particle 'shang' ('move up'), the particle 'xia' ('move down') takes the 'bottom' (or 'lowest point') of a vertical plane to be defined as the concept of an endpoint. In conceptual terms, the action (or process) indicated by the verb is seen as moving down to the 'lowest point' of the vertical plane. The action comes to an end when it comes into contact with the lowest point. And by implication, the action is construed as having attained its goal, psychologically.

In Teng (1977) the particle 'xia' ('move down') was interpreted as involving a 'theme', which is separated from its source. His analysis can, to some extent, explain the sentences in (112), where the first verb entails 'concrete', physical motion.

- (112) a. Ta ba yüyi tuo-xia
 he BA raincoat remove-separate
 'He took off the raincoat.'
- b. Ta cong shu-shang zhai-xia yi-ge
 he from tree-top pluck-separate one-cl.
 pingguo
 apple
 'He plucked an apple from the tree.'

One thing to note here is that the notion of 'separation' (or 'disconnection') indicates only the initial stage of the 'downward' movement of the action, in both physical and non-physical senses. The action is construed as having come to an end only after it has come into contact with the 'lowest point'. For this reason, the notion of an endpoint of the action in the examples of (112) is only implied.

Teng's analysis, on the other hand, fails to clear up the following examples in (113) in that the notion of movement of a theme cannot be established.

- (113) a. Ta fan-xia le₁ taotiande zuixing
 he commit-down le₁ heinous crime
 'He has committed a heinous crime.'
- b. Ta liu-xia le₁ ta de dizhi
 he leave-down le₁ he Poss. address
 'He left his address (here).'

The verb particle 'xia' ('move down') in the examples of (113) suggests that the downward movement referred to by the verb, in a non-physical sense, has come into contact with the 'lowest point'. And by implication, the result has been fixed. It should be mentioned here that all the RV compounds in (113) - 'fan-xia' ('to commit') and 'liu-xia' ('to leave') - suggest that the result (achieved by the verb) has been firmly implanted.

c) The combinations 'shanglai' and 'xialai'

On the other hand, the interpretation of the concept of an endpoint involved in the particles 'shang' ('move up') and 'xia' ('move down') in terms of the two opposite poles of a vertical plane, as proposed here, can further explicate the semantic nature of the combinations of these two particles with the 'deictic' motion verb 'lai' ('come'). By way of explanation, consider first the following examples:

- (114) a. Wo ba fangzi zu-xialai le₁
 I BA house lease-come down le₁
 'I have rented the house.'
- b. Wo ba zhe-ben shu mai-xialai le₁
 I BA this-cl. book buy-come down le₁
 (Lit.) 'I have bought this book.'
- c. Nian-xialai
 read-come down
 'commit to memory (by reciting).'
- d. Andun-xialai
 settle-come down 'get settled down'
- (115) a. Shuo-bu shanglai
 speak-NEG come up
 'cannot succeed in saying (something)'
- b. Bei-shanglai (le₁)
 recite-come up (le₁)
 'succeed in reciting (an article, etc)'
- c. hua-bu shanglai
 paint-NEG come up
 'cannot succeed in painting (something)'

The combinations 'shanglai' ('come up') and 'xialai' ('come down'), as shown in (114) and (115) respectively, have baffled some Chinese linguists (e.g., Teng, 1977; S-F Huang, 1977) in their attempts to deal with either the directional verb particles (e.g., Teng, 1977) or the 'deictic' motion verbs 'lai' ('come') and 'qu' ('go') (e.g., S-F Huang, 1977). Teng (1977), for example, has left out the examples such as those in (114) and (115) in his analysis of verb particles in Chinese. S-F Huang (1977), who attempted to give a characterization of the 'deictic' motion verbs 'lai' ('come') and 'qu' ('go') in Chinese along the lines of Fillmore (1975), also failed to come up with a viable solution to the examples such as those in (114) and (115) on grounds that the verbs in (114) and (115) are not 'motion' verbs, and thus the particles 'shanglai' ('come up') and 'xialai' ('come down') cannot be interpreted as 'deictic' either.[18]

The inability of Teng (1977) and Huang (1977) to provide a viable interpretation of the combinations 'shanglai' and 'xialai', it seems to me, is due to their failure to notice the intrinsic temporal nature (i.e., aktionsart) indicated by the directional verb-particles 'shang' ('move up') and 'xia' ('move down') on the one hand, and by the motion verbs 'lai' ('come') and 'qu' ('go') on the other, as discussed in the previous section.

An important thing to notice about the intrinsic temporal nature of the combinations 'shanglai' ('come up') and 'xialai' ('come down') is the compositional nature involved. As mentioned in the foregoing section, the 'deictic' motion verb 'lai' ('come'), when used as a 'telic' aktionsart marker, has lost its original spatial connotation; nevertheless, it still expresses the meaning of transition process, which is perceived to be towards the speaker, psychologically. Furthermore, 'lai' ('come') is typically concerned with the inception of an event that is presently relevant or the development of an event up to a specific point of time from which the event is viewed. This characteristic feature of 'lai' ('come') has an important influence on the interpretation of the combinations 'shanglai' ('come up') and 'xialai' ('come down').

First, the combination 'shanglai' ('come up'). As we have just noted, the particle 'shang' takes the 'highest point' of a vertical plane to be defined as the concept of an endpoint. Hence, when the action has moved up and come into contact with the 'top', in conceptual terms, it is seen as the achievement of a result. It should be noted that the semantic properties involved in the combination 'shanglai' ('come up') are built up from those of its constituent parts. The consequence of this is that the combination 'shanglai' ('come up') suggests that the action (or event) has moved up and come into contact with the 'highest point', which is taken as the notion of an endpoint. In addition, the 'highest point' of the vertical plane is thought of as the focal point from which

the event is viewed. This explanation is totally in accord with the meanings conveyed by the examples in (115). They all express the successful (or unsuccessful) result of an action (or activity). For instance, 'bei-shanglai' ('recite-come up') in (115b) refers to a successful performance of the action, i.e., 'reciting', whereas 'hua-bu shanglai' ('paint-not-come up') in (115c) refers to an unsuccessful performance of an action, i.e., 'painting'.

Next, the combination 'xialai' ('come down'). As we have just mentioned, the particle 'xia' ('move down') takes the 'lowest point' of a vertical plane to be defined as the notion of an endpoint. Hence, when the action has moved down, in conceptual terms, to the 'lowest point', it is taken as the completion of the action, and by implication, the attainment of a result. Since the particle 'xia' ('move down') takes the 'lowest point' as the concept of an endpoint, the consequence of this is that when the action is terminated, it is thought of as being 'anchored', and thus firmly implanted. The semantic properties involved in 'xialai' ('come down'), just as those involved in the combination 'shanglai' ('come up), are also built up from its constituent parts. Hence, 'xialai' ('come down') suggests that the action has moved down and come into contact with the 'lowest point' of the vertical plane, which is understood as the achievement of a result. Furthermore, the 'lowest point' is seen as the focal point from which the event is viewed. It should be recalled that the 'deictic' motion verb 'lai' ('come') is concerned with the inception of an event and thus the event is currently relevant. This description of the combination 'xialai' is fully in agreement with the meanings indicated by all the examples in (114). For example, 'zuoxialai' ('rent') in (114a) asserts that the result referred to by the action, i.e., 'renting', has been achieved, and hence firmly fixed. That is to say, 'the house is now granted to my possession'. Moreover, the result is related to the inceptive stage of the event, and is thus presently relevant. The same is true of other examples in (114).

(ii) The Inception of an Event

Represented in this subgroup of directional verb particles are 'chu' ('come out/ come into existence') and 'qi' ('emerge'). Essentially, they take the inceptive stage of an event (denoted by the verb) as the notion of an endpoint from which the achievement of a result is inferred. However, 'chu' ('come out') differs from 'qi' ('emerge') in the way in which the transitional stage of an event is expressed: the former refers to the transition from the stage of 'non-existence' to that of 'existence', whereas the latter refers to the transition from the stage of 'non-appearance' to that of 'appearance'.

a) The particle 'chu' ('come out')

The basic function of the particle 'chu' ('come out') is derived from its verb counterpart, which indicates a movement from 'inside' to 'outside', as the examples in (116) illustrate:

- (116) a. Ta chu-guo le
 he go-abroad Part.
 'He will go abroad.'
- b. Dianbao yijing fachu le₁
 telegram already send out le₁
 'The telegram has already been sent out.'

As a result of this lexical meaning, 'chu' ('come out') refers to a transition process from the stage of 'non-existence' to that of 'existence', and by implication, from obscurity to clarity. It should be mentioned here that the final stage of the transition process indicated by the particle 'chu' ('come out') is the inceptive stage of an event, which is understood as the termination or result of the action. This point can be illustrated by the examples in (117) and (118):

- (117) a. Ta ti-chu le₁ yi-ge hen hao de yijing
 he suggest-out le₁ one-cl. very good idea
 'He has made a very good suggestion.'
- b. Wo kan-chu ta de xinshi
 I see-out he Poss. worry
 'I have discerned what weighed on his mind.'
- (118) a. Tamen yijing zhao-chu le₁ zhe-chang
 they already look for-out le₁ this-cl.
 huo de yuanyin
 fire Poss. cause
 'They have already found out the cause of the
 fire.'
- b. zuo-chu yi-dian chengji
 do-come out one bit result
 'to achieve some results'

b) The particle 'qi' ('emerge')

The basic function of the particle 'qi' ('appear') is derived from its verb counterpart, which means 'depart from the original position', as shown in (119):

- (119) a. qi-shen
 move-body 'get up'
- b. Feiji qi-fei le
 airplane move-fly Part.
 'The plane takes off.'

This meaning of 'qi' gives rise to the sense of 'direction' of an action, as in

- (120) Na-qi yi-kuai shoupai
 take-up one-cl. handkerchief
 'Take up a handkerchief.'

'Qi' ('appear'), when used as a particle, refers to a transition process from the stage of 'non-appearance' to that of 'appearance'. The final stage of the transition process indicated by 'qi' ('appear'), just like the one referred to by the particle 'chu' ('come out'), is also the inceptive stage of an event, which is taken as the termination or result of that action. This point can be illustrated by the examples in (121).

- (121) a. Ta ti-qi le₁ zhe-jian shi
 he mention-emerge le₁ this-cl. matter
 'He brought up (raised) this issue.'
- b. Wo xiang-qi le₁ yi-ge xiaohuo
 I think-emerge le₁ one-cl. joke
 'I thought of a joke.'

The distinction between 'chu' ('come out') and 'qi' ('emerge') can be seen by contrasting (117a) with (121a): The former indicates the creation of something which has no prior existence. Hence, it shows a transition process from the stage of 'non-existence' to that of 'existence'. By contrast, the latter refers to something which has prior existence and is only brought to one's awareness. Therefore, it shows a transition process from the stage of 'non-appearance' to that of 'appearance' (cf. Teng, 1977).

An important thing to notice about the directional particles 'chu' ('come out') and 'qi' ('appear') is that the 'telic' notion denoted by these two particles, viz., the inceptive stage of an event is taken as the termination (or result) of an action, is much the same as that suggested by the 'deictic' motion verb 'lai' ('come'), as discussed in the previous section. Because of this fact, the combinations 'chulai' ('come out') and 'qilai' ('come-emerge') retain, essentially, the semantic properties of 'chu' and 'qi' respectively; however, when they combine with the 'deictic' motion verb 'lai', an additional feature, i.e., that of the motion verb 'lai', is added. That is, the inceptive stage of the event is regarded as the focal point from which the event is viewed. The semantic properties of the combinations 'chulai' ('come out') and 'qilai' ('come-emerge') can be seen from the examples in (122) and (123) respectively:

- (122) a. Wo ba banfa xiang-chulai le₁
 I BA solution think-come out le₁
 'I thought out a solution.'
- b. Xin de zhiliaofa yijing yanjiu-chulai le₁
 new Poss. treatment already research-out le₁
 'A new treatment has been discovered.'
- (123) a. Women ba suoyao de zijin jizhong-qilai
 we BA all Poss. fund combine-come emerge
 'We pooled together all the funds.'
- b. Nei-jian shiqing wo xiang-bu qilai
 that-cl. matter I think-NEG-come emerge
 'I didn't remember that matter.'

5.4 Conclusion

In concluding this chapter, I will examine the difference between the 'aspectual' verbs (or aspectualizers) (cf. Freed, 1979) such as 'kaishi' ('begin') and 'jixu' ('continue'), and 'aktionsart' markers such as 'qilai' ('come-emerge') and 'xiaqu' ('go down'). The defining characteristics of 'aspectualizers', according to Freed (1979:19), are as follows: each of these verbs has a particular temporal reference of its own, indicating either the beginning or the completion of the activities (or events), and they have an influence on the aspectual interpretations of the sentences which contain them by adding their 'aspectual' meanings to these sentences.[19]

Freed (1979) has made some correct observations on the semantic nature of the lexical aspectual verbs like 'begin', and 'continue'; however, the question of how the 'aspectual' verbs are to be distinguished from the 'aktionsart' markers remains unanswered. The reason is that Freed (1979) has concentrated mainly on the English aspectual verbs.

The semantic distinction between 'aspectual' verbs and 'aktionsart' markers, for example, in Chinese consists in the fact that the latter, but not the former, involve the

notion of 'transition process'. As an example we can contrast the aspectual verb 'kaishi' ('begin') with the aktionsart marker 'qilai' ('come-emerge'). Both 'kaishi' ('begin') and 'qilai' ('come-emerge') are concerned with the beginning of a situation; however, there exists a semantic distinction between the two. That is, in the case of 'kaishi' ('begin'), the inception of an event can be pin-pointed in time, whereas in the case of 'qilai' ('come-emerge'), it cannot, as the following examples illustrate:

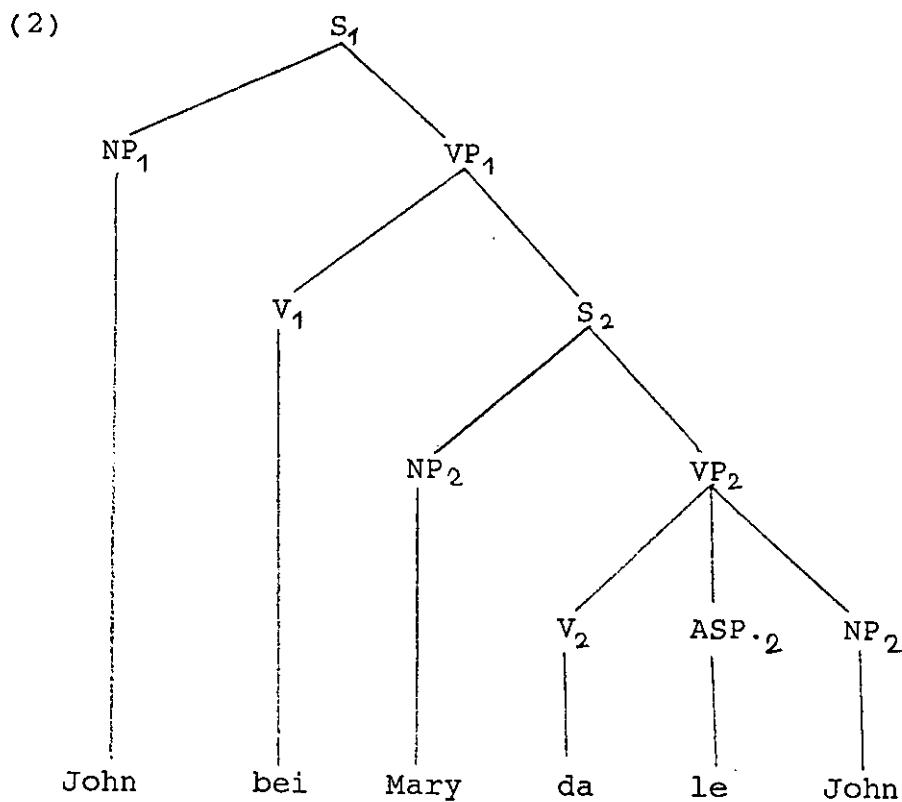
- (124) a. Wanshang jiudianzhong kaishi xiayü
 evening nine o'clock begin rain
 'At exactly nine o'clock it began to rain.'
- b. Waibian zhengzai kaishi xiayü
 outside right now begin rain
 'Outside it is beginning to rain right now.'
- (125) *a. Wanshang jiudianzhong xia-qi-yü-lai
 evening nine o'clock rain-come-emerge
- *b. Waibian zhengzai xia-qi-yü-lai
 outside right now rain-come-emerge
- c. Jintian xia-qi-yü-lai
 today rain-come-emerge
 'Today it is raining.'

What distinguishes the examples in (124) from those in (125) is that the latter, not the former, involve the notion of 'transition process'. To put it differently, the aktionsart marker 'qilai' ('come-emerge') is associated with the meaning of inception in the process of transition, i.e., from the stage of 'non-appearance' to that of 'appearance', however abrupt the actual situation may be.[20] This explains the reason why the 'inceptive' stage of the event cannot be pin-pointed in time, as can be seen from the unacceptable sentences in (125). On the other hand, the aspectual verb 'kaishi' ('begin') is concerned only with the beginning of an event or action, regardless of whether or not any transition is involved in reality.[21] As a result, the inception of an event indicated by 'kaishi' ('begin') can be pin-pointed in time.

Footnotes to Chapter V

- [1] Following Mantaro J. Hashimoto (1969), A. Hashimoto (1971) also treats the passive construction in Chinese as being derived from an embedding structure with 'bei' being treated as a matrix verb. Hence, in the deep structure, the passive construction consists of a matrix sentence with 'bei' as the main verb, which takes a complement sentence. The deep structure of (1), for example, is represented in (2):

(1) John bei Mary da le₁
 John bei Mary hit le₁
 'John was beaten by Mary.'



- [2] As mentioned in Section 5.1, the defining characteristic of RV compounds is that they can take the potential infixes 'de' and 'bu'. Thompson (1973a:365) regards the 'potential' form as one piece of evidence in support of her lexical analysis of RV compounds, which follows from the following hypotheses:

- (a) The creation of potential forms is most naturally described by a lexical derivational rule.
- (b) The input to such a lexical derivational rule must be derived in the lexicon.

[3] T-L Mei (1961:476), on the other hand, characterized the RV compounds in Chinese as being composed of a task verb and an achievement verb, with the former being used to "assert the performance of the task activity", whereas the latter is used to "assert that some state of affairs obtains over and above the performance of the task activity". This description holds for the group of lexical RV compounds proposed here.

T-L Mei's (1961) description of RV compounds in Chinese was influenced by Ryle's (1949) characterization of two types of verbs, which he called 'task' and 'achievement' verbs respectively.

[4] Dowty (1979:124-25) lists the following kinds of accomplishment sentences:

i) Non-Agentive Accomplishments:

e.g. The door's opening causes the lamp to fall down.

ii) (Non-Intentional) Agentive Accomplishments:

e.g. John broke the window.

iii) Agentive Accomplishments with secondary Agent:

e.g. John forced Bill to speak.

iv) Intentional Agentive Accomplishments:

e.g. John murdered Bill.

[5] Vendler (1984b) characterizes the pattern of causative constructions as follows:

$$(1) N_1 C(N_2 (\dots W \dots)) \rightarrow N_1 V_W N_2$$

'C' marks the 'causal factor'; 'W' stands for the key word of the predicate involved, and V_W stands for the causative derivative of that word (with or without morphological change).

- [6] Vendler's (1984) analysis of action sentences, to some extent, was influenced by Ross' (1972) treatment of 'act'.
- [7] The adverb-slots that surround the S-node involve two types of adverbs: 'sentence-adverbs' (e.g., probably, unfortunately), and 'illocutionary-adverbs' (e.g., honestly, sincerely) (cf. Jackendoff, 1972). Here, we are concerned only with the adverbial adjuncts that modify the elements involved in the performance of an action, namely, slots (3-5) in (46).
- [8] Miller & Johnson-Laird (1976:489) suggested the following treatment of 'cause':
 CAUSE (S, S'): Something characterized by statements S 'causes' something characterized by statements S' if:
- i) Happen (S)
 - ii) Happen (S')
 - iii) Cause ((i), (ii))
- This treatment of CAUSE is somewhat akin to Dowty's analysis of causation, as discussed in Section 5.3.2.1.
- [9] Syntactically, the adverbial adjunct 'deliberately' in (62a) takes the VP as its scope of modification, but in (62b) it takes the Predicate rather than the VP as its scope of modification.
- [10] Vendler (1975) lists two uses of the word 'cause' in English. It may function as a neutral word of efficacy (like 'make'), or it may express the dependence of an event upon a fact, in which case, it occurs with two nominalized sentences, e.g., 'the firing of the gun' caused 'the breaking of the window'. The meaning of the Chinese verb 'shi' ('cause/make') corresponds to the first sense of the word 'cause' in English. That is, it functions as a word of efficacy.
- [11] In actual fact, 'action' can 'cause' (cf. Vendler, 1984b). In terms of the description of causation presented here, this fact can be accounted for in that 'action' refers to the initial point of this linking relationship.

- [12] This use of the particle of 'DE' was first pointed out by M-K Gao (1940, 1957). He claimed that this sense of 'de' is derived from its lexical meaning 'get, obtain'. The particle 'de', on the other hand, has been treated as a 'complementizer' by linguists working within the generative-transformational framework (e.g., S-F Huang, 1975; J-T Huang, 1982).
- [13] Teng's (1977) interpretation of the notion of 'theme' is, in a sense, taken from Gruber (1976:38), who calls "the entity which is conceived of as moving or undergoing transactions as the theme". Gruber further adds that "the theme may be in motion in a physical or in an abstract sense, indicating a change of position, possession, identification, activity, etc."
- [14] It should be mentioned here that in some recent works (e.g., Brinton, 1985; Traugott, 1978) the particles in English such as those in (1) have been treated as markers of 'telic' aktionsart rather than as markers of 'aspect'.
- (1) a. The firm has decided to close down its New York branch.
- b. The fire in the stove burned out much faster than we expected.
- c. John squandered away the money in a month.
- d. We have gone over the issues involved.
- [15] Comrie (1976:106) treats this use of the motion verb 'go' as indicating the prospective aspectual meaning.
- [16] This use of the motion verbs 'come' and 'go' as markers of aktionsart is also attested in Japanese (cf. Soga, 1983). However, Soga (1983) treats the motion verbs 'come' and 'go' in Japanese as 'aspectual' markers, indicating the 'ingressive' aspect.
- [17] The verb-particle ending 'guoqu' ('go past'), on the other hand, also refers to 'change of process', when used with action verbs, as shown in (1):

(1) a. Women ba diren pian-guoqu le₁
 we BA enemy cheat-go past le₁

'We have cheated the enemy.'

- b. Ni ba zhe yi-dian hulüe-guoqu le₁
 you BA this one-point ignore-go past le₁
 'You have failed to notice this point.'

[18] Fillmore (1975:58) characterizes the 'deictic' motion verbs 'come' and 'go' as follows: 'Come' indicates motion towards the location of either the speaker or the addressee at either 'coding time' or 'reference time', while 'go' indicates motion towards a location which is distinct from the speaker's location at 'coding time'. By 'coding time' is meant "the time during which the communication act as a whole takes place" (1975:53), and by 'reference time' is meant "the point or period that is the temporal focus or background for the event or condition being described in the clause" (1975:52).

[19] Freed (1979) treats the following verbs as 'aspectualizers': 'begin, start, continue, stop, cease, finish, end'.

[20] The combination of the directional verb particle 'qi' ('emerge') with the 'deictic' motion verb 'lai' ('come') has been treated as an 'inchoative' aspect marker in Chao (1968). But it seems to me that 'qilai' should be interpreted as a marker of 'telic' aktionsart rather than as a marker of aspect in that it takes the inceptive stage of an event to be defined as the concept of an endpoint. It is to be noted that the V+O compounds in Chinese that indicate an activity can occur with 'qilai', and the resulting expressions have the interpretation of 'getting into the act of doing something', as the following examples show (cf. S-F Huang, 1977):

- (1) a. zou-qi-lu-lai
 walk-come-emerge 'walk'
 b. chang-qi-ge-lai
 sing-come-song-emerge 'sing'

Notice that with the addition of 'qilai' ('come-emerge'), the V+O compounds are converted from an 'atelic' situation into a 'telic' situation.

[21] Freed (1979) points out that the aspectual verb 'begin' presupposes the prior non-

occurrence of the event in question, and hence any reference made will be to the future occurrence of the event named.

Chapter VI

BA-CONSTRUCTION AND BOUNDEDNESS OF THE OBJECT

6.1 Introduction

In the chapters that preceded I was mainly concerned with the semantic issues involved in the verb compounds, viz., verb-object compounds and resultative verb compounds respectively. In the present chapter I will shift the focus to the semantic issues involved in an entire sentence. In particular, I will investigate the semantic properties of the BA-construction in Chinese. The BA-construction has attracted a lot of attention among Chinese linguists in the last three decades. As a result, there exists a plethora of literature on the subject of this construction.

Despite the fact that the BA-construction has been discussed by linguists working within different theoretical frameworks (e.g., Chao, 1968; A. Hashimoto, 1971; Thompson, 1973b; K. Mei (1978); Teng, 1975; among many others) and has been examined from different angles, Chinese linguists have thus far failed to come up with a satisfactory explanation of the problems pertaining to the construction. In this chapter I will approach the BA-construction from a different standpoint, viz., in terms of the inherent temporal properties (ie., aktionsarten) involved in the construction. My purpose here is not to present an exhaustive study of the BA-construction. Rather, I will focus on some of the semantic issues related to the construction. In order to facilitate the discussion later in this chapter, I will first give a brief description of the characteristic features of the BA-construction.

semantic interpretation. As an illustration, sentence (4), to a certain extent, can be said to be the non-BA counterpart of (2b):

- (4) Zhangsan ji (le₁) qian hui-jia le₂
 Zhangsan send (le₁) money back-home le₂
 'Zhangsan sent/has sent money home.'

However, (2b) differs from (4) in semantic interpretation: the latter refers to an 'unbounded' event, indicating that the activity of 'sending money home' took place, whereas the former refers to a 'bounded' event, indicating an accomplished action - that is, 'Zhangsan has sent the money home'. Since my major concern here is not with the syntactic treatment of the BA-construction, I will not go into the particulars of the transformational analysis.

It is important to mention here that the difficulty with the analysis of the BA-construction in Chinese lies not so much in the syntactic issues involved as in the semantic restrictions on the construction. The semantic issues of the BA-construction have been approached by linguists from different angles, that is, the BA-object, the verb (complement), and, to a lesser extent, the subject NP.

First, the condition on the BA-NP (i.e., object). It is generally recognized by Chinese linguists (e.g., Li & Thompson, 1974; Mei, 1972, 1978; Teng, 1975; among others) that the BA-object has to be 'definite' (in the sense of referentiality). For example, the BA-NPs in (2) - 'huaping' ('vase'), 'qian' ('money'), and 'di' ('floor') - all have a 'specific' reference. However, the BA-objects such as those in (5) - 'qian' ('money') and 'ren' ('person') - are taken as 'generic', referring to a class of entities.

- (5) a. Ta ba qian kan de hen zhong
 he BA money regard Part. very important
 'He regards money as very important.'
- b. Ta conglai bu ba ren dang ren kan
 he always NEG BA person treat human regard
 '(Lit.) He does not treat others as human
 beings. That is, he always has a low opinion
 of others.'

According to Mei (1978), one function of the BA-construction is to mark the BA-NP as 'specific' in reference; the BA-NPs in the 'generic' sentences such as those in (5), on the other hand, are treated as 'exceptions' in that they refer to a class concept. I will return to this point in Section 6.2.2.

Next, the condition on the verb-complement of the BA-construction. It has been suggested by some linguists (e.g., Frei, 1956-57; Mei, 1978) that there exists a connection between the BA-construction and the perfective aspect in Chinese.

Frei (1957-56), for example, has remarked that most BA-sentences end in the perfective marker *le*₁ or with a resultative complement, as can be seen from the examples in (2). According to Frei (1957:91), the BA-construction underlies a 'change', and hence "it is quite natural, though not always necessary, that its completion and the kind of result be explicitly stated".[2]

k. Mei (1978), on the other hand, has expressed a somewhat similar view by claiming that the BA-construction is closely linked to the use of the perfective aspect in Chinese. To start with, Mei grouped the verbs in Chinese into six types in terms of the following criteria.

- i) Whether a verb can admit the perfective aspect (i.e., the marker *le*₁) or not;
- ii) Whether a verb can admit the progressive aspect or not;
- iii) Whether a verb can express a 'state' or not.

By using the presence or absence of the above criteria, Mei (1978:172-73) categorized the verbs as follows:

- (6) A. [+Perfective, +Progressive, -State]
 e.g. da ('hit') pian ('cheat')
 mai ('sell') gaosu ('tell')
- B. [+Perfective, -Progressive, -State]
 e.g. wang ('forget') jiejie ('solve')
 diao ('lost') gongkai ('make public')
- C. [+Perfective, +Progressive, +State]
 e.g. changzan ('praise')
 xinshang ('appreciate')
 fankang ('resist')
 bang ('lavish praises on')
- D. [+Perfective, -Progressive, +State]
 e.g. ai ('love') yuanliang ('forgive')
 hen ('hate') pa ('be afraid of')
- E. [+Perfective, -Progressive, +State]
 e.g. xiang ('look, appear')
 xihuan ('prefer, enjoy')
 taoyan ('dislike, detest')
- F. [-Perfective, -Progressive, +/-State]
 e.g. dui (zhe) ('face') kao ('lean')
 xiang (zhe) ('face') chao ('face')

In Mei's view, whether a verb can have a BA-construction is determined by whether or not it admits the perfective aspect. If a verb does not admit the perfective aspect marker *le*₁, then its object NP cannot be preposed by the BA-construction. For example, verbs belonging to the categories of (E) and (F) do not admit the perfective aspect, and accordingly they do not have the BA-construction.

The correlation between the BA-construction and the perfective aspect in Chinese, as observed by Mei (1978) and Frei (1956-57), it seems to me, is quite misleading. Admittedly, the BA-construction, in most cases, ends in the perfective aspect marker *le*₁. Here, a word should be said about the perfective aspect used by these linguists. By 'perfective aspect', both Mei (1978) and Frei (1956-57) refer to the aspect marker *le*₁, which is taken to be defined as denoting the completion of an action. As we pointed out in Chapter 2, the function of the aspect marker *le*₁ is not to signify the 'completion' of an action (or event), which falls into the domain of 'aktionsart', i.e., the intrinsic temporal nature of a situation. On the contrary, the perfective aspect marker *le*₁ indicates 'succession of event' in the sense that it shows a 'localized' event from one point (or stage) to another on the time axis.

As we shall see in the next section, BA-sentences are mainly connected with temporally bounded (or perfective) events, which are closely linked with 'achievement' sentences, in the terminology of Vendler (1967). In most cases, the event associated with the BA-construction involves a transitive change of state. Hence the function of the perfective aspect marker *le*₁ can be said to denote a transitive change of state (of an event) on the time axis, as exemplified in (7):

- (7) Ta ba huaping da-po *le*₁
 he BA vase strike-break *le*₁
 'He broke the vase.'

Note that (7) involves a 'lexicalized' RV compound. As we noted in Chapter 5, the internal structure of the 'lexicalized' RV compound refers to an 'action-(resultant) event' sequence in the sense that the 'event' arises from the performance of the action. Thus, (7) involves two 'consecutive' phases (of an event). And the function of the perfective aspect marker *le*₁ is, so to speak, to indicate these two 'phases' (of an event) on the time axis.

It should be mentioned here that the aspect marker *le*₁ in (7) can be thought of as a haplology of the perfective aspect marker *le*₁ and the sentence-final marker *le*₂, which, as discussed in Chapter 2, denotes 'temporal indeterminacy' in the sense that it is 'temporally neutral' except for its constant implication of some past action. This interpretation is perfectly in agreement with the intrinsic temporal character involved in the BA-construction in (7), which indicates a transitive change of state. The perfective aspect marker *le*₁ shows the 'anterior' point (of the event) on the time axis, whereas the sentence-final marker *le*₂ shows the 'subsequent' point (or stage) of the event on the time axis.

When the BA-construction, on the other hand, does not involve a transitive change of state, it can do without the perfective aspect marker *le*₁, as the examples in (8) illustrate:

- (8) a. Ta ba wenti jieshi de hen qingchu
 he BA question explain Part. very clear
 'He explained the problem very clearly.'
- b. Ta ba men quan de hen jin
 he BA door close Part. very tight
 'He shut the door very tightly.'

The examples in (8) involve a result complement phrase, i.e., 'hen qingchu' ('very clear') and 'hen jin' ('very tight'). As we suggested in Chapter 5, the result complements in (8) function as, in the terminology of Vendler (1984a), 'event' adverbs, describing the event (denoted by the verb). For example, the result complement 'hen qingchu' ('very clearly') in (8a) characterizes the event, i.e., the extent of 'his explaining'. That is, 'his explaining of the problem' is such that 'it becomes clear'. The same is true of (8b). For this reason, the examples in (8) do not involve a transitive change of state, as those in (7) do.

Another inadequacy of Mei's (1978) interpretation of the connection between the BA-construction and the perfective aspect lies in the criteria drawn upon by him in distinguishing the verbs in Chinese, as mentioned earlier. His conditions, in the strict sense, are no more than diagnostic tests for verbs. For this reason, his six types of verbs, as shown in (6), are incapable of accounting for the semantic and aspectual characteristics of verbs in Chinese. In view of this weakness, Mei (1978) has to draw upon another criterion in the interpretation of the restriction on the verb with respect to its occurrence in the BA-construction. The criterion is whether a result complement can be added to the verb or not.

Among Mei's (1978) six types of verbs, verbs of type (A) and type (B), in most cases, can have the BA-construction. Verbs of other types such as (C) and (D), though they allow the perfective aspect, cannot occur in the BA-construction. According to Mei, some verbs of (C), (D), and (F), when combined with a result complement, can have the BA-construction, as shown in the following examples:

- (9) a. Zhangsan ba Lisi bang le₁ yi-fan
 Zhangsan BA Lisi applaud le₁ one-cl.
 'Zhangsan lavished praises on Lisi.'
- b. Women ba nei-fu hua xinshang le₁
 we BA that-cl. painting appreciate le₁
 yi-fan
 one-cl.
 'We appreciated that painting (for a while).'
- (10) a. Zhangsan ba nei-ge guafu ai-shang le₁
 Zhangsan BA that-cl. widow love-up le₁
 'Zhangsan fell in love with that widow.'
- b. Zhangsan ba Lisi hen-tou le₁
 Zhangsan BA Lisi hate-through le₁
 'Zhangsan hated Lisi's guts.'
- (11) Tamen ba mubiao dui-zhun le₁
 they BA target aim-accurate le₁
 'They zeroed in on the target.'

However, Mei (1978) argued, those verbs in (9-11), when combined with a result complement, have been transformed into verbs of either type (A) or type (B).

In spite of invoking the above semantic criterion, Mei's (1978) explanation still remains unsatisfactory. In the first place, he does not make explicit the characteristic features involved in the verbs of type (A) and type (B), except that they admit the perfective aspect; accordingly, the semantic properties shared by verbs derived from other types and those of (A) and (B) are left unaccounted for. Secondly, he does not explain in what way verbs derived from other types with the addition of a result complement are related to his classification of verbs.

To properly understand the semantic and aspectual properties of the sentences in (9-11), we first have to look at the semantic nature of the verbs involved. Note that the verbs in (9-11) - 'bang' ('lavish praises on'), 'xinshang' ('appreciate'), 'ai' ('love'), 'hen' ('hate'), and 'dui' ('face') - all refer to a state, in the terminology of Vendler (1967).[3] However, when combined with a result complement, these verbs are transformed from a 'state' into an 'achievement', indicating a 'change of state' in the sense of the attainment of a result. In fact, 'derived' verbs such as, e.g., 'ai-shang' ('love-move up'), 'hen-tou' ('hate-through'), and 'dui-zhun' ('aim-accurate') in (10) and (11) are resultative verb compounds.

The examples in (9), on the other hand, require some explanation. They take the 'quantified' expression 'yi-fan' ('one-cl.) as a result complement phrase, which functions as a 'count adverbial'. This kind of quantified expressions can be said to be a unique characteristic of Chinese grammar. The essential function of quantified expression like 'yi-fan' in (9) is two-fold: a) they convert a verb from a 'state' or 'process' into an 'achievement' by adding the concept of attainment of a result, and b) they indicate the quantification of an action. An important thing to note here is that quantified expres-

sions such as 'yi-fan' in (9) do not refer to a single act, but to an accumulation of a sequence of single acts.

On the basis of what has been said, it seems that the semantic restrictions on a verb with regard to its occurrence in the BA-construction is not so much that the verb can admit the perfective aspect or not, as Mei (1978) suggested. Rather, whether a verb can have the BA-construction is determined mainly by its internal structure, that is, by whether the verb-complement refers to a 'bounded' situation or not. I will return to this point in the next section.

Finally, we shall consider the condition on the subject of the BA-construction. It has also been suggested by linguists that the subject of the BA-construction is either an 'agentive' NP (e.g., S-F Huang, 1973) or 'definite (or specific)', as the following examples illustrate.

- (12) a. Nei-ge ren ba pingguo chi le₁
 that-cl. person BA apple eat le₁
 'That person ate/has eaten the apple.'
- b. ?*Yi-ge ren ba pingguo chi le₁
 one-cl. person BA apple eat le₁
 'A person ate/has eaten the apple.'
- c. You yi-ge ren ba pingguo chi le₁
 there is one-cl. person BA apple eat le₁
 'Someone ate/has eaten the apple.'

The subject NP of (12a) can be construed as 'agentive' and 'specific'. The unacceptability of (12b) lies in the fact that the subject NP is 'non-specific'; the subject NP of (12c), on the other hand, is taken as 'specific', and hence the sentence is acceptable.

The invoking of the notion of 'agent' in defining the subject NP of the BA-construction, as proposed by some linguists (e.g., S-F Huang, 1973), however, will encounter difficulty in that not all subject NPs of the BA-construction can be interpreted as 'agent', as the following examples show:

- (13) a. Taifeng ba nei-ke shu chui-duan le₁
 typhoon BA that-cl. tree blow-broken le₁
 'The typhoon struck and broke the tree.'
- b. Ta-keche ba xingren zhan-si le₁
 truck BA pedestrian roll-die le₁
 'The truck knocked the pedestrian dead (by
 rolling him over).'
- (14) a. Zhe-ge haizi ba wo de xin dou
 this-cl. child BA I Poss. heart all
 ku-luan le₁
 cry-upset le₁
 'This child cried so much that I got upset.'
- b. Zhe-ben shu ba wo de yanjing dou
 this-cl. book BA I Poss. eye all
 kan-hua le₁
 see-blur le₁
 'This book (i.e., the small print of this
 book) tired my eyes.'

Note that the subject NPs in (13) and (14) cannot be interpreted as 'agent'. Recall that in Chapter 5 we replaced the term 'agent' by a semantically neutral term 'actor', which refers to a participant in an action sentence (cf. Jackendoff, 1983). Thus, the latter term, but not the former term, can take account of all the subject NPs in (13) and (14) respectively.

Furthermore, the condition on the subject NP of the BA-construction - that it must be 'specific' in reference - stems mainly from the fact that the BA-construction is associated with a temporally bounded event which requires, among other things, a temporally bounded subject.

6.2 The BA-construction and Event Predication

Thus far, I have given only a brief description of the characteristic features of the BA-construction. In this section, I will take a new tack in approaching the problems with the BA-construction, which have baffled Chinese linguists in their attempts to find a viable explanation of some of these issues.

As we have shown in the previous section, the BA-construction is typically concerned with event predication. That is, the BA-sentences are limited only to those denoting 'events'.

Before proceeding, a few remarks on the salient characteristics of event predication seem to be in order here. Mourelatos (1981) in this respect has explored the connection between the count-mass distinction (in the nominal system) and the aspectual character (i.e., the intrinsic temporal nature) of verbs. To start with, he modified Vendler's (1967) four-fold classification of verbs and grouped them into three classes. The semantic criterion drawn upon in his classification of verbs is whether they denote state, process, or events. Verbs denoting events fall into two subclasses: those denoting accomplishments and those denoting achievements.

According to Mourelatos (1981), the notions of 'count' and 'mass' also apply to verbal meanings: That is, event predications have the 'count' feature (i.e., they are count-quantified), while on the contrary, state predications and process predications are not 'count-quantified' constructions. This distinction can be seen in the fact that only event predications allow the 'count adverbials' (e.g., twice, three times, etc.) with reference either to events themselves or to the occasions. For example, (15)

(15) He knocked on the door three times.

may mean that there was one knock on the door on three different occasions, or it may mean that there were three knocks on a single occasion.[4]

As stated by Mourelatos (1981:205), "what is noteworthy about such cases of double reading is that, even if the cardinal adverbial is assigned to the occasion, another 'count' adverbial, namely, 'once', is implied as assigned directly to the event". In addition, it is only in the case of event predication that cardinal count adverbials can be used with reference to the situation (i.e., to the event itself) as distinct from the occasion. (See Mourelatos (1981) for more details.)

Mourelatos' (1981) description of event predication, that is, countability of events, is relevant to the explication of the intrinsic temporal character of the BA-construction. As noted earlier, BA-sentences are confined primarily to those sentences denoting 'events', and in particular, to those referring to a single 'occasion'. Viewed in this way, the 'count' feature 'once' is implied as assigned directly to the event, as can be seen from the examples in (16):

- (16) a. Ta ba nei-ben xiaoshuo kan-wan le₁
 he BA that-cl. novel read-finish le₁
 'He finished reading the novel.'
- b. Ta ba dianxiji nong-huai le₁
 he BA T.V. set make-broken le₁
 'He ruined the television set.'

Another thing to notice about the BA-sentences in (16) is that the temporal characteristics can be taken as 'temporally definite (or bounded)' in the sense that the situation represented in the sentence is interpreted as 'terminating'. This salient feature of the BA-construction can be seen as the referential quantification of events.

At this point a word should be said about the referential quantification of events. Events are individualized and identified on the basis of their temporal characteristics and on the basis of the referential characteristics of the material objects (i.e., subject and object) taking part in the event in question. In other words, the referential quantification of a sentence is a consequence of its actualization in time and of the referential quantification of its arguments. These two factors are crucially involved in the interpretation of the referential characteristic of the BA-construction. As we noted, the BA-construction is temporally bounded, and the subject and the object of the construction are taken as 'specific' (in reference). Hence, an adequate explanation of the BA-construction hinges on the elucidation of the interrelation between the 'aktionsart' nature of the verb and the semantic structure of its objects in that not only events, but objects as well, can be taken as temporal entities.

6.2.1 Perfectivity and Total Events

Up to this point we have only touched briefly on the characteristic properties of the BA-construction. As said, BA-sentences are associated with temporally bounded events. The notion of 'temporal boundedness' of events used here corresponds to that of 'perfectivity' used by other linguists (e.g., Kabakčiev, 1984; Wierzbicka, 1967). According to Kabakčiev (1984:644), a perfective (or bounded) action (or event) in any language is performed by a temporally bounded subject; it affects (or effects) temporally bounded objects. As an illustration, we can take (17), which is described in Vendler's (1967) terms as an 'accomplishment' sentence:

(17) The boy throw a stone.

In Kabakčiev's (1984) view, perfectivity in (17) is explicated through the subject and the object which are marked for boundedness by the articles, whereas the verb is unmarked, and hence it only refers to a perfective action, i.e., a transition from one stage to another. As opposed to English, perfectivity in Russian, according to Kabakčiev (1984), is explicated through the verb, which is marked for boundedness, whereas the objects are unmarked in that articles (or identical markers) in Russian are non-existent. For example, the English sentence in (17) is rendered into Russian as follows (Kabakčiev, 1984:645):

(18) Mel'cik brosil kamen
 boy throw (pfv) stone
 'The boy threw a stone.'

In view of this difference, Kabakčiev (1984) held that the main function of the articles in languages such as English, along with the expression of definiteness and indefiniteness, (in the strict sense, specificity and non-specificity), is the explication of temporal boundedness of objects, and hence the explication of perfective actions.

Perfective events, on the other hand, are connected not only with accomplishment sentences like (19), but also with achievement (in Vendler's (1967) terms) sentences like (20):

- (19) a. The child ate an apple.
 b. The girl ironed a skirt.
 c. The mechanic repaired the car.
- (20) a. The child found the key.
 b. The girl lost the pencil.

The objects of the achievement sentences in (20) can also be regarded as temporally bounded entities. On this account the articulated objects are still marked for temporal boundedness.

There are two essential points pertaining to perfective events which have been brought up by Kabakciev (1984). These two points, taken together, offer a penetrating explanation of the characteristic features of perfective events across languages. First, languages differ according to whether they use nominal or verbal means in the explication of temporal boundedness of events. This difference, in turn, has to do with whether a language has or lacks articles. Hence, the existence or non-existence of articles in a language can serve as a criterion in dividing languages roughly into two groups: those with articles, and those without articles. The former such as English use articles as markers of temporal boundedness, whereas the latter such as Russian use verbal markers in the explication of temporal boundedness. Second, perfective events are considered to be intimately connected with accomplishment and achievement sentences, as shown in (19) and (20) respectively. What accomplishment and achievement sentences share in common, as discussed in Chapter 3, is that they are interpreted as actions that involve the terminal point of the event (i.e., the attainment of a goal).

It is interesting to mention here that the first point brought up by Kabakciev (1984) - that is, languages differ according to whether they use nominal or verbal markers of temporal boundedness - complements the vectorial/scalarial distinction with respect to the characterization of verbs as suggested in Chapter 3 (cf. Poldauf, 1982). The use of nominal or verbal markers in the explication of temporal boundedness, to a great extent, correlates with the verb content of a language.

As we mentioned in Chapter 3, vectorial-verb languages like English possess a 'directed' verb content in the sense that the action is conceived of as reaching somewhere in a time sphere, whereas scalarial-verb languages like the Slavonic languages possess a 'non-directed' verb content in the sense that the action is conceived of as being confined in a time sphere. Furthermore, vectorial-verb languages resort more to 'syntactic' means in the explication of the endpoint achievement of events. For example, accomplishment and achievement sentences in English are expressed through an activity and a specific noun phrase, which indicates the terminal point of an event. By contrast, scalarial-verb languages resort more to 'lexical' means in the explication of the endpoint achievement of events.

The interpretation given by Kabakciev (1984) of the use of articles in English to signify temporal boundedness of events, in fact, tallies with the 'vectorial' character of the English verb, which has a 'directed' verb content. Notice that accomplishment and achievement sentences like those in (19) and (20) are syntactically formed. And the articulated objects can be said to perform a dual role: a) they refer to the temporal boundedness of objects, and b) they serve to indicate that the event (signified by the verb) has reached its boundary, viz., the attainment of a goal.[5]

Chinese, as opposed to English, uses verbal markers in the explication of temporal boundedness. It should be recalled that in Chapter 3 Chinese was characterized as a

scalarial-verb language, which possesses a 'non-directed' verb content. Hence, a temporally bounded action (or event) in Chinese, for the most part, is expressed through the verb, which is marked 'lexically' for temporal boundedness. Highly illustrative of this fact is that most accomplishment and achievement sentences in English, such as those in (19) and (20), are expressed through resultative verb compounds, as shown in (21) and (22) respectively:

- (21) a. Xiaohai ba pingguo chi-(diao) le₁
 child BA apple eat-(away) le₁
 'The child ate an apple.' (= 19a)
- b. Nei-ge nūhai ba quanzi tang-hao le₁
 that-cl. girl BA skirt iron-finish le₁
 'The girl ironed a skirt.' (= 19b)
- c. Jigong ba qiche xiuli-hao le₁
 mechanic BA car repair-ready le₁
 'The mechanic repaired the car.' (= 19c)
- (22) a. Xiaohai ba yaoshi zhao-zhao le₁
 child BA key find-obtain le₁
 'The child found the key.' (= 20a)
- b. Nūhai ba qianbi diu-(diao) le₁
 girl BA pencil lose-(away) le₁
 'the girl lost the pencil.' (= 20b)

As we see, the verbs in (21) and (22) all involve 'grammaticalized' resultative verb compounds. The characteristic feature of this type of verb compound is that the second verb of the compound functions as an 'aktionsart' marker, indicating the terminal point of the event, as contrasted with the English examples in (19) and (20) in which temporal boundedness is marked on the object by the article. The objects in (21) and (22) are not marked by any nominal markers such as articles (or identical markers). This is due to the fact the articles are non-existent in Chinese, as in the case of Russian.[6] In this respect there exists a correlation between the use of the BA-construction in Chinese and the expression of temporal boundedness of objects. A bounded (or perfective) action, as Kabakciev (1984) stated above, involves a temporal-

ly bounded subject and temporally bounded objects. And languages use either nominal or verbal markers in the explication of temporal boundedness. The latter claim made by Kabakciev (1984), however, requires further clarification. To start with, no matter whether a language uses nominal or verbal means in the explication of temporal boundedness, the objects have to be bounded. Differently put, even though a language uses verbal markers in the explication of temporal boundedness of events, the objects involved still have to be bounded. In this regard there exists an intimate relationship between the notion of temporal boundedness of objects and that of 'specificness' of objects. By 'specificness' is here meant that the speaker has a particular unique individual in mind (whether actual or potential) without actually revealing the identity of the individual (cf. Palacas, 1977). An NP is bounded if it is specific with respect to the amount of its referent. Hence, the notion of temporal boundedness of objects has to include the notion of 'specificness' of objects. For example, the objects of the accomplishment and achievement sentences in (19) and (20) all can be construed as fixed and specific by virtue of having taken part in a total event in the sense that the action has reached its terminal point.

Notice that the Chinese counterparts of (19) and (20) are all expressed by means of BA-sentences. Interpreted from this standpoint, the function of the marker 'BA' can be said to signify the 'boundedness' of objects.[7] This point can further be explained by the contrast between the (a) and (b) sentences in (23):

- (23) a. Ta xie le₁ xin (le₂)
 he write le₁ letter (le₂)
 'He wrote a letter/some letter./He was engaged in some letter-writing.'
- b. Ta ba xin xie-(hao) le₁
 he BA letter write-(complete) le₁
 'He wrote a letter./He finished writing a specific letter.'

The difference between the (a) and (b) sentences in (23) lies in the fact that the object of (23b), but not that of (23a), is marked for 'boundedness'. In other words, the object NP 'xin' ('letter') in (23b), but not the one in (23a), refers to a fixed, specific amount of its referent. As a result, the (a) and (b) sentences in (23) involve different interpretations: (23b) signifies an accomplished event on a definite time stretch, whereas (23a) refers to an 'unbounded' event. In a sense, the action in (23a) constitutes only part of the total action in (23b). Therefore, only (23b), but not (23a), admits the 'telic' durational adverbials such as 'shi fenzhong' ('ten minutes'), which focus on the shortness of the time span in which the process is completed, as shown in (24):

- (24) a. ??Ta shi fenzhong jiu xie le₁ xin le₂
 he ten minutes then write le₁ letter le₂
- b. Ta shi fenzhong jiu ba xin xie-(hao) le₁
 he ten minutes then BA letter write-finish le₁
 'He wrote the letter in ten minutes.'

The use of 'BA' to mark 'object boundedness' has an effect on the interpretation of the characteristic properties involved in the BA-construction, which, on the whole, is associated with a temporally bounded event. The essential characteristics of the BA-construction can thus be stated as follows: a) it represents a total event, which involves 'change of state/process', and b) the event is temporally bounded (in the sense that the situation concerned is represented as terminating).

Having clarified the intrinsic temporal properties involved in the BA-construction, we turn now to the semantic issues related to the construction. In what follows, we first tackle the internal structure of the verb-complement involved in the BA-construction. We shall deal with the semantic issues related to the BA-object in the next section.

For a start, it has generally been observed by Chinese linguists (e.g., Mei, 1978) that the BA-construction can occur only with 'action' verbs, but cannot occur with 'sta-

tive' verbs. However, some stative verbs, when combined with a result complement, can occur in the BA-construction, as the examples in (25) and (26) illustrate:

- (25) a. Zhangsan hen ai Li xiaojie
 Zhangsan very love Li miss
 'Zhangsan loves Miss Li very much.'
- b. *Zhangsan ba Li xiaojie ai (le₁)
 Zhangsan BA Li miss love (le₁)
- c. Zhangsan ba Li xiaojie ai-shang le₁
 Zhangsan BA Li miss love-up le₁
 'Zhangsan fell in love with Miss Li.'
- (26) a. Zhangsan hen hen Lisi
 Zhangsan very hate Lisi
 'Zhangsan hates Lisi (very much).'
- b. *Zhangsan ba Lisi hen (le₁)
 Zhangsan BA Lisi hate (le₁)
- c. Zhangsan ba Lisi hen-tou le₁
 Zhangsan BA Lisi hate-through le₁
 'Zhangsan hated Lisi's guts.'

Notice that 'state' verbs (in Vendler's (1967) terms) such as 'ai' ('love') and 'hen' ('hate') in (25) and (26), when combined with a result complement, have been converted into an 'achievement'. In other words, a state has been presented as an 'event'. The result particles 'shang' ('move up') and 'tou' ('through') in (25c) and (26c) respectively serve to indicate the termination of the event. This is perfectly in conformity with the intrinsic temporal character of the BA-construction, as mentioned above. However, not all state verbs can be presented as 'events', and hence only those which can combine with result particles or result complements like 'ai' ('love') and 'hen' ('hate') in (25) and (26) can occur in the BA-construction.

Next, the perception verbs in Chinese need to be mentioned here because they have posed problems for Chinese linguists in their effort to explain the connection between the perception verbs and the BA-construction. In general, perception verbs

like 'kan-jian' ('see') and 'ting-jian' ('hear') cannot occur in the BA-construction, as the following examples in (27) and (28) show:

- (27) a. Ta kan-jian le₁ yi-jia feiji
 he see le₁ one-cl. airplane
 'He saw an airplane.'
- b. *Ta ba feiji kan-jian le₁
 he BA plane see le₁
- (28) a. Women ting-dao le₁ yi-ge hao xiaoxi
 we hear le₁ one-cl. good news
 'We have heard good news.'
- b. *Women ba (yi-ge) hao xiaoxi ting-dao le₁
 we BA (one-cl.) good news hear le₁

However, perception verbs like 'kan' ('look') and 'ting' ('listen') in (29) and (30), when combined with result particles or result complements, can occur in the BA-construction, as exemplified in (29) and (30):

- (29) a. Women yijing ba wenti kan-qingchu le₁
 we already BA problem look-clearly le₁
 'We have already examined the problem.'
- b. Yisheng ba ta de bing kan-hao le₁
 doctor BA he Poss. illness look-recover le₁
 'The doctor has restored him to health.'
- c. Ta ba nei-ben shu kan le₁ liang-bian
 he BA that-cl. book look le₁ two times
 'He read/has read the book twice.'
- (30) a. Ni ba ta de hua ting-qingchu le₁ ma?
 you BA he Poss. talk listen-clear le₁ Q. Part.
 'Have you caught on to what he said?'
- b. Wo ba nei-shou ge ting le₁ liang-bian
 I BA that-cl. song listen le₁ two times
 'I listened to the song twice.'

What, then, are the differences between perception verbs in (27-28) and those in (29-30)? S-F Huang (1973), for example, treated the former as 'stative' perceptive verbs, and the latter as 'active' perceptive verbs. However, he did not specify the semantic features involved that set these two groups of perceptive verbs apart from

each other. Wierzbicka (1980b:101) in this respect has suggested the following set of equations for perception verbs such as 'see' and 'hear'. [8]

to see - to perceive by the eyes

to hear - to perceive by the ears

These equations have shown that the semantic notions involved in perception verbs are complex in nature. In a sense, perception verbs can be interpreted as 'to come to have knowledge of (something) by means of the senses'. Seen in this perspective, they actually involve two notions, namely, the activity through the use of the senses, and the result. This description fits in with the internal structure of perception verbs in Chinese. For example, consider the perception verbs 'to see' and 'to hear'. Their Chinese equivalents are 'kan-jian' ('look-perceive') and 'ting-jian' ('listen-perceive') respectively, both of which are composed of two parts, the first part indicating the activity by means of the senses, whereas the second part indicates perception of what is seen or heard. On the other hand, the so-called 'active' perceptive verbs referred to by Huang such as 'kan' ('look') and 'ting' ('listen') specify only the activity (or action) through the use of senses. The distinction between these two groups of perception verbs can further be illustrated by (31):

(31) Ta chao nei-ge fangxiang yi kan,
he toward that-cl. direction one look

kan-jian le₁ yi-jia feiji
look-perceive le₁ one-cl. airplane
*kan le₁ yi-jia feiji

'He looked in that direction, and saw an airplane.'

It is to be noted that active perception verbs, in most cases, refer to a task activity only indirectly connected with the use of the senses. For example, 'kan' ('look') in 'kan-hao' ('look-recover') of (29b) indicates an action indirectly related to the use of the eyes. But the verb compound 'kan-hao' in (29b) actually means that 'the doctor

restored him to health by examining him'. That is, the doctor's action of 'examining' is done indirectly through the use of the eyes. (29b) refers to an achievement, indicating a change of state, and hence satisfies the intrinsic temporal character of the BA-construction. By contrast, stative perceptive verbs like 'kan-jian' ('look-perceive') and 'ting-jian' ('listen-perceive') indicate only passive perception of what is seen, heard, etc., through the use of the senses, and hence are incompatible with the requirements of the BA-construction.

Finally, not all 'action' verbs can occur in the BA-construction, contrary to the claim made by some Chinese linguists (e.g., Mei, 1978). For example, those action verbs which indicate purely physical actions like 'da' ('beat') and 'fang' ('put') cannot occur in the BA-construction alone unless they combine with a result complement, as the sentences in (32) show:

- (32) a. ??Wo ba ta da le₁
 I BA he beat le₁
 'I beat him.'
- b. Wo ba ta da-yun le₁
 I BA he beat-unconscious le₁
 'I knocked him unconscious.'
- c. Wo ba ta da le₁ yi-dun
 I BA he beat le₁ one-cl.
 'I gave him a beating.'
- d. Wo ba ta da-dao zai di-shang
 I BA he beat-fall on floor-top
 'I knocked him down on the floor.'
- e. Wo ba ta da de ku-gilai le₁
 I BA he beat Part. cry-start le₁
 'I beat him to such an extent that he started
 to cry.'

The unacceptability of (32a) lies in the fact that the 'event' in question is not 'bounded', and hence it is incompatible with the intrinsic temporal character of the BA-construction. Note that the result complement of the sentences in (32) assumes various

forms, which, in the main, serve to indicate the terminal point of the action. As a consequence, the event is temporally bounded, and hence is compatible with the semantic properties of the BA-construction.

6.2.2 Specificness and Object Boundedness

To this point we have only been concerned with expounding the intrinsic temporal properties involved in the BA-construction. In this section we turn to the semantic issues related to the BA-object. It should be pointed out that most studies found in the literature with regard to the BA-construction have focused on the problems with the BA-object (e.g., Teng, 1975; Thompson, 1973b; H. Wang, 1959), and in particular, the semantic constraints on the BA-object.

H. Wang (1959), for example, postulated that the BA-object must satisfy one of the following two conditions:[9]

- i) It must refer to specific person(s) or items.
- ii) It must refer to person(s) or item(s) which existed before the action, whether the latter are specific or not.

First, let us consider the following sentences:

- (33) a. Ta mai le₁ yi-ben shu
 he buy le₁ one-cl. book
 'He bought a book.'
- b. ??Ta ba yi-ben shu mai le₁
 he BA one-cl. book buy le₁
- c. Ta ba (yi-ben) shu mai-cuo le₁
 he BA (one-cl.) book buy-wrong le₁
 'He bought the wrong book.'
- (34) a. Ta gai le₁ yi-dong fangzi
 he build le₁ one-cl. house
 'He built a house.'
- b. ??Ta ba yi-dong fangzi gai le₁
 he BA one-cl. house build le₁
- c. Ta ba fangzi gai-hao le₁
 he BA house build-finish le₁
 'He built a house./He finished building a house.'

The unacceptable sentences in (33) and (34) can be explained in terms of the above two conditions: the object 'book' in (33b) is 'non-specific' (hence, Condition (i)), whereas the object 'house' in (34b) is 'non-existent' before the action (hence, Condition (ii)). I will return to this point below.

Teng (1975:108-109), on the other hand, argued against the above two conditions proposed by H. Wang (1959) on the grounds that they failed to account for the semantic status of the BA-object. The main weakness of Wang's (1959) proposal is the 'existence' condition, which actually refers to 'ontological' existence. In Teng's (1975) view, Wang's 'existence' condition is applicable to 'effected' or 'created' objects such as 'house' in (34), but not to the object of 'buy', as in (33). When one sets out to buy something 'actual' or 'virtual', Teng claims, he must presuppose the existence of it in the real world.

Furthermore, Teng holds, the examples in (35) will pose problems for H. Wang's (1959) conditions because the (a) and (b) sentences in (35) all specify 'existent' as well as 'actual' objects, but (35b) is unacceptable.

(35) a. Wo kan le₁ nei-ge nü-ren
 I look le₁ that-cl. woman
 'I looked at that woman.'

b. *Wo ba nei-ge nü-ren kan le₁
 I BA that-cl. woman look le₁

Thus, Teng concludes that what is involved in the semantic interpretation of the BA-object is not so much the notion of 'existence' of the object as that of 'actual' or 'virtual' reference of the object.

At this point a few remarks should be made on the 'actual' and 'virtual' distinction proposed by Teng (1975), which is strongly speaker-oriented.[10] According to Teng (1975:103), "a noun is referred to as 'actual' if reference to it is available to the speaker or the addressee or both. As far as the speaker is concerned, an 'actual' noun must have a specific referent in mind, knowledge of its existence must also be present in mind. Existence is not taken as existence in the real world. It is existence in the speaker's world. Thus, an 'actual' noun may simply be conceived of or imagined by him. A 'virtual' noun, on the other hand, lacks this particular referent. No image of it exists in the speaker's mind".

When these two distinctions, between 'actual' and 'virtual', and between speaker and addressee, are combined, there are the following possibilities (1975:106):

(36)	Speaker	Actual	Actual	Virtual	Virtual
	Addressee	Actual	Virtual	Actual	Virtual
		(A)	(B)	(C)	(D)

Teng (1975:109) proposed the following conditions on the object of the BA-condition, which he called the 'accusativized' object, in light of the 'actual/virtual' distinction of NP's.

- (A) An accusativized object must be 'actual' for both the speaker and the hearer, or for the speaker alone;
- (B) An accusativized object must be a Patient;
- (C) In volitional and completed events, an accusativized object must be 'actual' at the time of action and not at the time of utterance.

Among these three conditions, (A) is self-evident; however, (B) and (C) require further explanation. Condition (B), according to Teng (1975:109), explains the ungrammaticality of (37d):

- (37) a. Wo kan le₁ ni de shu
 I look le₁ your Poss. book
 'I read your book.'
- b. Wo ba ni de shu kan le₁
 I BA your Poss. book look le₁
 'I read your book.'
- c. Wo kan le₁ nei-ge nü-ren
 I look le₁ that-cl. woman
 'I looked at that woman.'
- d. *Wo ba nei-ge nü-ren kan le₁
 I BA that-cl. woman look le₁

Teng (1975:110) claimed that in (37) the same surface verb actually has two quite different properties. In (37a), the Agent goes through the book and tried to assimilate the message expressed in it. In this way, the book is perceived to have undergone a change of state, from strange to familiar. Thus, the book plays the role of Patient. The situation in (37d) is quite different. 'The woman' only specifies the termination point of the Agent's gaze, and is not affected in any way by the Agent's action. It plays the role of Goal. Goal is not to be accusativized.

Condition (C) is invoked to explain sentences such as those in (38), which, according to Teng (1975:111), are ambiguous between the volitional and non-volitional readings:

- (38) a. Wo ba huaping nong-po le₁
 I BA vase make-cl. le₁
 'I broke a vase.'
- b. Wo ba lian-pen ti-fan le₁
 I BA basin kick-turn over le₁
 'I kicked the basin over.'

When volitional events are involved, the Agent must know which vase or basin (hence 'actual') he intended to break or kick. But if non-volitional or accidental events are involved, the Agent did not have such knowledge (hence 'virtual'). However, at the time of utterance both objects are 'actual'.

Teng (1975) has decidedly thrown light on the reference of NP's in Chinese. The 'actual/virtual' distinction suggested by him corresponds more or less to the 'specific/non-specific' distinction as found in the literature (cf. Palacas, 1977). Despite this fact, his conditions on the BA-construction, as mentioned, are inadequate because they are based totally on the referential properties of the object alone. While Teng is correct in pointing out the critical flaw of H. Wang's (1959) 'existence' condition, which hinges on the 'ontological' existence of the object, he still falls short of providing a satisfactory answer in that he has just replaced the 'existence' condition with the condition of semantic roles. Nevertheless, the distinction among certain semantic roles such as 'Patient' and 'Goal' in some contexts are quite arbitrary. For instance, according to Teng, the ungrammaticality of (37d) is due to the fact that the object 'woman' plays the role of 'Goal' rather than that of 'Patient'. This explanation is quite unconvincing on grounds that the unacceptability of (37d) is not so much that the object 'woman' plays the role of 'Goal' as that it does not signify a temporally bounded event. Notice that (37d) is rendered acceptable when a result complement is added, as shown in (38):

- (38) Wo ba nei-ge nü-ren kan le₁ yi-yang
 I BA that-cl. woman look le₁ one-eye
 'I glanced at the woman.'

If analysed in terms of semantic roles, the object 'woman' plays the same role in (38) as that in (37d). Yet they differ in grammaticalness.

As stated in the previous section, the BA-construction is associated with a temporally bounded event, which is interpreted as a 'total' event in the sense that the situation in question is represented as terminating. Furthermore, in Chinese temporal boundedness of events is explicitly indicated by the verb. The function of the quantified expression 'yi-yang' ('one-eye') is to convert a verb from an 'unbounded' situation into a 'bounded' situation by adding the concept of an endpoint to the action. As a result, (37) is acceptable. Given this fact, Teng's interpretation of the BA-construction in terms of the semantic role of the object fails completely.

Teng (1975), however, did point up the fact that the verb 'kan' ('look') involves different semantic properties, as has been shown by the examples in (37). As we mentioned in the foregoing section, the verb 'kan' ('look'), which belongs to the category of 'active' perceptive verbs in Chinese, is linked to the interpretation of various activities (or actions) that are performed through the use of the eyes. It is important to notice that the semantic interpretation of the (a) and (b) sentences in (37), viz., the activity of 'reading', derives from the verb-object compound 'kan-shu' ('look-book'). 'Kan' ('look') in (37c), on the other hand, indicates only the physical task activity through the use of the eyes. In view of this fact, (37a) differs from (37c) in semantic interpretation. The former refers to the activity of 'reading' (through the use of the eyes), whereas the latter refers to the physical activity of 'gazing'.

The flaw in the conditions suggested by Teng (1975) and H. Wang (1959), as stated above, is that they focus exclusively on the referential properties of the BA-object, and disregard the intrinsic temporal properties of the construction as such. So far as I can see, the 'specific' reference of the BA-object is the consequence of the intrinsic

temporal properties of the BA-construction and thus cannot be treated as the sole condition of the BA-construction. This point can be illustrated by (34), repeated below as (39):

- (39) a. Ta gai le₁ yi-dong fangzi
 he build le₁ one-cl. house
 'He built a house.'
- b. ??Ta ba yi-dong fangzi gai le₁
 he BA one-cl. house build le₁
- c. Ta ba fangzi gai-hao le₁
 he BA house build-finish le₁
 'He built a house. (That is, the house has
 been finished.)'

If interpreted in terms of H. Wang's (1959) conditions, the unacceptability of (39b) issues from the fact that the object 'house' is 'non-existent' before the action. This explanation, however, is unjustifiable in that the object 'house' is also 'non-existent' in (39c), which, on the other hand, is acceptable. Teng's (1975) 'actual' and 'virtual' distinction also fails to offer a satisfactory answer because the object 'house' in (39b) and (39c) is 'actual' and interpreted as 'Patient'. In light of the analysis suggested here, the unacceptability of (39b) is due to the fact that the event in question is not temporally bounded. Notice that when the result particle 'hao' ('finish') is added to the verb 'gai' ('build') in (39c), the sentence is rendered acceptable. That is, (39c) has been converted into an achievement. In consequence of this fact, the object 'house' in (39c) is interpreted as bounded. As we mentioned in the foregoing section, there is a close linking between the notion of 'boundedness' of objects and that of 'specificness' of objects. The function of the particle 'BA' in (39c) is to mark 'object boundedness'. Accordingly, the object 'house' in (39c) is fixed and specific by virtue of having taken part in a 'bounded' event.

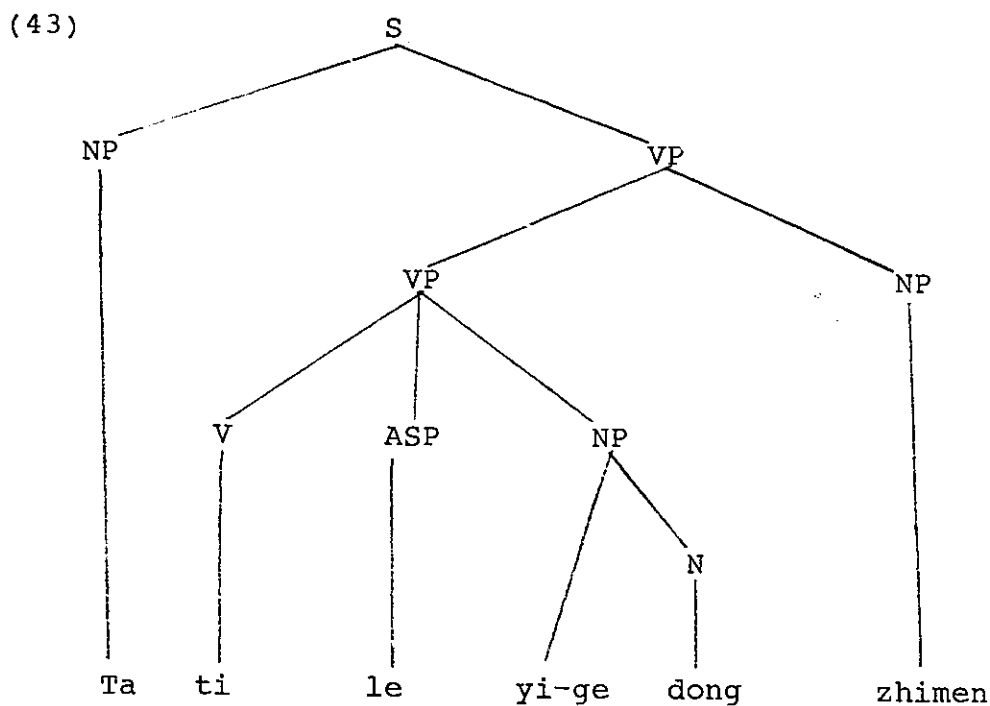
Another issue that bears on the BA-object is concerned with one type of BA-sentences first discussed by Thompson (1973b). This type of BA-sentences does not conform to the regular forms that have been discussed thus far. The following are typical examples of this type of BA-sentences.

- (40) a. Ta ba zhi-men ti le₁ yi-ge dong
 he BA paper-door kick le₁ one-cl. hole
 'He kicked a hole in the paper door.'
- b. Ta ba bilu sheng le₁ huo
 he BA fireplace make le₁ fire
 'He made a fire in the fireplace.'
- (41) a. Ta ba juzi bao le₁ pi
 he BA orange remove le₁ peel
 'He removed the peel from the orange.'
- b. Ta ba wu-ge pingguo chi le₁ san-ge
 he BA five-cl. apple eat le₁ three-cl.
 'He ate three of the five apples.'

To start with, Thompson (1973b) proposed the following condition for the BA-construction in general.

- (42) An NP_i may be fronted with 'BA' if the rest of the sentence answers the question 'What did the Agent do to NP_i?', that is, if it is semantically the 'direct object' of the sentence.

In order to account for the salient characteristics of the type of BA-sentences in (40) and (41), Thompson made a distinction between two kinds of objects: 'outer' and 'inner (or retained)' objects. For example, she posited the underlying structure of (40a) as follows:



'Zhi-men' ('paper-door') in (43) is taken as the direct object of the whole VP 'ti le₁ yi-ge dong' ('kicked a hole'). In Thompson's (1973) view, 'dong' ('hole') in (43) is designated as the 'inner (or retained)' object and 'zhi-men' ('paper-door') the 'outer object' of the verb. The BA-transformation is, therefore, always to prepose the 'outer' object.

Thompson's (1973) distinction between 'inner' and 'outer' objects, however, is not free of problems. The critical flaw lies in the fact that she fails to show the relationship between these two object NPs, which are treated in such a way that they seem to be unrelated to each other. As a matter of fact, this is not the case. The two object NPs are semantically linked to each other. H-N Cheung (1973) claimed that Thompson's (1973b) examples, as shown above, can be grouped into two categories: The sentences in (40) fall into one category, and those in (41) fall into another. Other examples of these two categories are given in (44) and (45) respectively.

Category I

- (44) a. Zhangsan ba men shang le₁ suo
 Zhangsan BA door put on le₁ lock
 'Zhangsan fastened the door with a lock.'
- b. Ta ba ping-li zhuang-man le₁ shui
 he BA bottle-inside fill-full le₁ water
 'He filled the bottle with water.'

Category II

- (45) a. Xuexiao ba ta mian le₁ zhi
 school BA he dismiss le₁ job
 'The school dismissed him from his job.'
- b. Ta ba yifu tuo le₁ yi-jian
 he BA clothes take off le₁ one-cl.
 'He took off one of his vestments.'

According to Cheung (1973:379), the two object NPs in Category II such as (41) and (45) are related to each other before the action takes place, whereas in Category I such as (40) and (44) it is the action identified by the verb that relates the two object NPs together.

H-N Cheung's (1973) explanation of the relationship of the two object NPs is, by and large, correct. Nevertheless, he still falls short of explicating the semantic and aspectual relations involved in the above two categories of BA-sentences.

As regards the BA-sentences of Category I, the BA-object NP (i.e., the 'outer object') actually designates the 'location' of the action (or activity), whereas the 'inner (or retained) object' indicates the result or instrument (means) of the action. The essential characteristic of this category of BA-sentences is to signify the assumed effect of the action. As an illustration, we can take (40b), repeated as (46):

- (46) Ta ba bilu sheng le₁ huo
 he BA fireplace make le₁ fire
 'He made a fire in the fireplace.'

(46) implies a noticeable change of state in the object regarded as 'location', i.e., the fireplace.

This explanation accords with the intrinsic temporal properties involved in the BA-construction, as suggested in the previous section. That is, the BA-construction is associated with a temporally bounded event. On the other hand, there exists a close relation between the verb and the so-called 'retained' object 'huo' ('fire') in (46), which actually indicates the result and the means of the action. 'Sheng-huo' ('start-fire') in (46) can be taken as a verb-object compound. Given this fact, the 'inner object' and 'outer object' distinction suggested by Thompson (1973b), for all its simplicity, fails to give an explanation for the semantic properties involved in this category of BA-sentences.

Sentence (46) can further be contrasted with its non-BA counterpart, as in (47):

(47) Ta zai bilu-li sheng le₁ huo
 he in fireplace-inside make le₁ fire
 'He started a fire in the fireplace.'

(47) does not imply a noticeable change of state with regard to the 'location', i.e., 'fireplace'. The locative phrase 'zai bilu-li' ('in the fireplace') in (47) serves only as the location where the action took place. Hence, the difference between (46) and (47) lies in the fact that the former indicates a total (i.e., complete) event, whereas the latter an 'incomplete' (i.e., unbounded) event.

It is interesting to point out here that the semantic distinction between (46) and (47) bears a resemblance to the semantic difference in some pairs of sentences in English such as those in (48) and (49):

- (48) a. They loaded the truck with bricks.
 b. They loaded bricks on the truck.
- (49) a. John sprayed the wall with paint.
 b. John sprayed paint over the wall.

It has been observed by linguists (e.g., Fillmore, 1968; Wierzbicka, 1980a) that the (a) sentences in (48) and (49) indicate a 'holistic' meaning, whereas the (b) sentences in (48) and (49) a 'partitive' meaning. For instance, (49a) implies that most of the wall was sprayed with paint, whereas (49b) implies that only a small part of the wall was sprayed with paint. According to Declerck (1976), the verb 'spray' in (49a) incorporates the adverbial particle 'over', and hence implies 'completeness' of the action. This can be seen by the fact that the adverbial particle 'over' may always be inserted after transitive 'spray', as shown in (50):

(50) John sprayed the wall (over) with paint.

In other words, the 'holistic' meaning involved in (49a) derives from the 'completeness' of the action. (49b), on the other hand, does not involve the incorporation of an adverbial particle, and hence does not imply 'completeness' of the action. As a consequence, the action in (49b) is taken as 'incomplete'. (For details, see Declerck (1976).)

The two object NPs in the BA-sentences of Category II, on the other hand, bear roughly two types of semantic relations to each other, one being that of the possessor and the possessed, as shown in (51), the other being that of the whole and the part, as shown in (52):

(51) Ta ba juzi bao le₁ pī (=42a)
 he BA orange remove le₁ peel
 'He peeled the orange.'

(52) Ta ba yifu tuo le₁ yi-jian (=45b)
 he BA clothes take off le₁ one-cl.
 'He took off one of his articles of clothing.'

H-N Cheung (1973) claimed that the two object NPs in the BA-sentences of Category II can have a 'genitivized' structure, which indicates the relationship that exists between the two NPs before the activity. For instance, according to him, (51) will have a 'genitivized' structure as in (53):

- (53) Ta ba juzi de pi bao le₁
 he BA orange Poss. peel remove le₁
 'He removed the peel from the orange.'

This interpretation suggested by Cheung (1973), to a certain extent, can account for the relationship between the two object NPs of in (51). It cannot explain the relationship between the two object NPs in (52), which does not admit a 'genitivized' structure, as shown in (54):

- (54) *Ta ba yifu de yi-jian tuo le₁
 he BA clothes Poss. one-cl. take off le₁

Even though (51) can be said to have a 'genitivized' structure like (53), they still differ in semantic interpretation: the former implies the change of state of the object 'orange', while the latter implies the change of state of the object 'peel'.

Viewed in this way, the characteristic feature of this group of BA-sentences, just like those of Category I, is to signify the assumed effect of the action. Hence, both (51) and (52) imply the change of state in the BA-objects. One thing to note is that the so-called 'retained' objects in both sentences - 'pi' ('peel') and 'yi-jian' ('one-cl.') - actually serve as the instrument (material) and the result of the action.

Finally, recall that in Section 6.1 we mentioned in passing that the object NPs in some BA-sentences are regarded as 'generic', referring to a class of entities, as exemplified in (5), repeated below as (55):

- (55) a. Ta ba qian kan de hen zhong
 he BA money regard Poss very important
 'He regards money as very important.'
- b. Ta cong lai bu ba ren dang ren kan
 he always NEG BA person as human regard
 '(Lit.) He does not treat others as human beings. (That is, he always has a low opinion of others.)'

K. Mei (1972:195) attempted to account for this use of the BA-object. He claimed that whether the 'BA-object is taken to express a class concept must be explained in terms of the semantic properties of the main verb, or in the case of (55a), the entire idiomatic verbal expression - that is, 'kan de hen zhong' ('to regard as important') - since the BA-objects in sentences with VP-complements are generally specific, as shown in (56):

- (56) a. Ta ba huaping da-po le₁
 he BA vase strike-broken le₁
 'He broke the vase.'
- b. Ta ba qian ji hui-jia le₁
 he BA money send back-home le₁
 'He sent the money home.'

Mei (1978) further added that one function of the BA-construction is to mark the BA-object as 'specific' in reference. However, he treated the BA-NPs in sentences such as those in (55) as 'exceptions' on the grounds that they refer to a class concept, i.e., a class of things.

Despite this explanation, Mei (1972, 1978) has still not touched the basic question regarding this type of BA-sentences. That is, what is the source of the 'generic' interpretation of the sentences in (55)? To provide an adequate answer to this question, we first have to look into the semantic properties involved in the interpretation of 'generic' sentences.

Declerck (1986) in this respect has suggested that the 'generic' interpretation of a sentence can only arise if the number of occasions is not represented as 'bounded' (i.e., limited) in the sentence. According to Declerck (1986:172), "a sentence refers to a bounded number of events if that sentence somehow involves reference to something that acts as a boundary for the number of events". 'Bounding' can be effected by different means. For example, NPs can have the effect of bounding the number of occa-

sions if they involve 'specificness' in reference in the sense that the speaker has a particular unique individual in mind without actually revealing the identity of the individual. To give a concrete example, let us consider the sentences in (57):

- (57) a. John drank the milk.
 b. John drank milk.

Notice that the NP 'the milk' in (57a) involves a definite determiner, and hence the referent of the NP is 'bounded' (i.e., fixed). This boundedness of the referent of the NP may entail boundedness of the number of occasions. The 'generic' interpretation is ruled out in (57a) accordingly. The NP 'milk' in (57b), on the other hand, refers to an unbounded quantity and consequently does not obstruct a 'repetitive' interpretation.

This interpretation of 'generic' sentences suggested by Declerck (1986) is extremely helpful in explicating the semantic differences between the BA-sentences in (55), which are taken as 'generic', and those in (56), which are 'non-generic' sentences. As we mentioned in Section 6.2, BA-sentences are, for the most part, connected with temporally bounded (or perfective) events. And the function of 'BA' is to mark 'object boundedness'. Thus the BA-object NP in a BA-sentence is fixed and specific in reference. Viewed in this way, the BA-object NP acts as a boundary for the number of events referred to by the BA-sentence. Therefore, the number of occasions in the BA-sentences such as those in (56) can be said to be represented as 'bounded' (i.e., limited). As a matter of fact, the BA-sentences in (56) refer to a single (completed) occasion. In the case of (56a), the same 'specific' vase can only be broken once. The same is true of (56b) in that the same 'fixed' amount of 'money' can only be sent home once.

If we turn to the BA-sentences in (55), the situation is somewhat different. First, the BA-sentences in (55) are not 'actualized' events. That is, they are not temporally

bounded. Second, the BA-NPs indicate 'stereotypical' notions rather than 'specific' referents, and hence they can be interpreted as 'unbounded'. For instance, the BA-object 'qian' ('money') in (55a) does not refer to a 'fixed' amount of money, but to a 'stereotypical' notion of 'money'. The same is true of the BA-object NP 'ren' ('people') in (55b). For this reason, the number of occasions is not represented as 'bounded' in the sentences of (55), and the generic interpretation arises in these sentences.

One thing to note about the sentences in (55) is that this use of the BA-construction is not common in Chinese. These sentences, for the most part, express general assumptions rather than factual statements. Geurts (1985) in this connection holds that 'generic' statements should be taken as expressing 'stereotypical' assumptions rather than as 'kinds' of things (cf. Carlson, 1981). According to Geurts (1985:250), "generic statements differ from ordinary factual statements in that they are typically used to express general assumptions, prejudices". This interpretation fits the meaning indicated by the BA-sentences in (55): (55a) expresses his general attitude towards money, whereas (55b) his prejudice against other people.

6.3 Conclusion

In this chapter I have investigated the BA-construction in Chinese from a different point of view, namely, from that of the intrinsic temporal properties involved in an entire sentence. The characteristic properties of the BA-construction can be summarized as follows:

- i) It is primarily connected with a temporally bounded (or perfective) event.
- ii) The function of 'BA' is to mark 'object boundedness'.

The semantic issues pertaining to the BA-construction, as have been shown in the foregoing, have to do directly or indirectly with these two conditions. The main reason

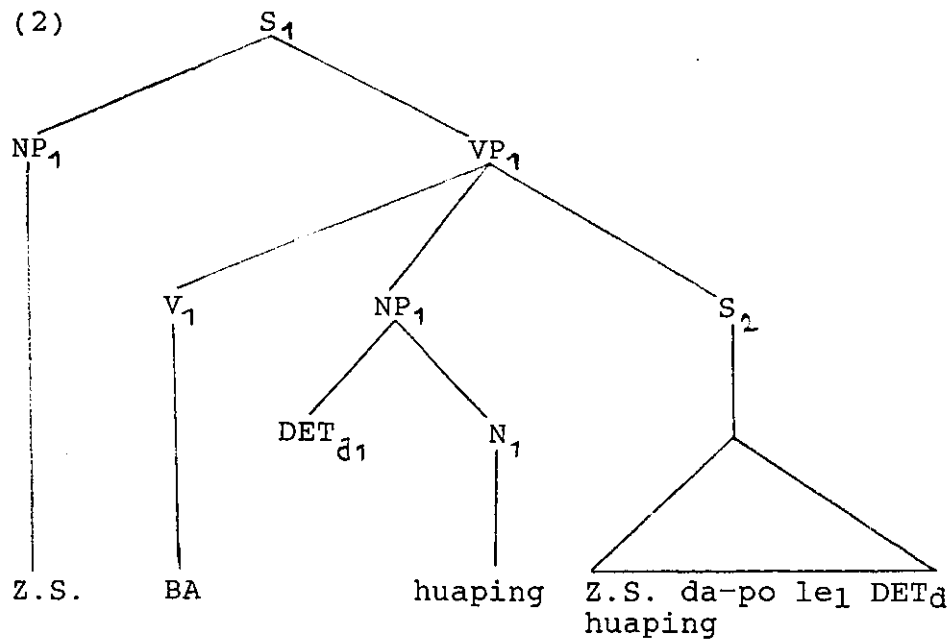
why Chinese linguists in the past failed to come up with a satisfactory explanation of the problems of the BA-construction is that they took no account of the semantic properties involved in the construction. Instead, they focused their attention exclusively on the semantic status of the BA-object. But, on the basis of what we have said in this chapter, the intrinsic temporal properties (i.e., aktionsarten) of the BA-construction play a decisive role in the explication of the construction as a whole.

Footnotes to Chapter VI

- [1] A. Hashimoto (1971:66), for example, proposed a transformational analysis for the derivation of the BA-construction. She treated the BA-construction as an embedding structure, with 'BA' as the matrix verb which takes an object NP and a complement sentence. A sentence like (1)

(1) Zhangsan ba huaping da-po le₁
 Zhangsan BA vase strike-break le₁
 'Zhangsan broke the vase.'

is derived through Equi-NP deletion by which all elements in the embedded S that are identical with those in the matrix S are deleted, as shown in (2).



'DET_d': the abstract underlying form of the definite determiner.

- [2] It should be pointed out here that the BA-construction in Chinese was treated by Frei (1956-57) as the 'ergative' construction. Frei (1956) stated that the connection between the 'ergative' construction and the perfective aspect has also been observed in other languages.

Frei's (1956) treatment of the BA-construction, however, requires some explanation. The BA-construction, to a great extent, displays semantic and aspectual properties similar to those found in the 'ergative' construction in an 'ergative' language. Wierzbicka (1980a:134) in this connection has made some interesting remarks concerning the semantic and aspectual properties of the 'ergative' construction. First, the ergative construction presents the action from the point of view of the 'patient' (i.e., object) rather than the 'agent' (i.e., subject). In other words, the ergative construction indicates "the high topicality of the patient" (i.e., object). Second, in many ergative languages, the ergative construction is restricted to the past tense (or perfective aspect). According to Wierzbicka (1980a), this is due to the fact that in the ergative construction, we take account of the effect of the action or that which is accomplished (cf. Comrie, 1976:85).

These two characteristic features of the ergative construction are also found in the BA-construction. But, notwithstanding this evidence, the BA-construction cannot be treated as equivalent to the ergative construction as such.

- [3] One diagnostic test for 'state' verbs in Chinese is that most of them can occur with the 'extent' adverbial 'hen' ('very'), as can be seen from the examples in (1) (Cf. Tai, 1984):

- (1) a. Zhangsan hen ai Li xiaojie
 Zhangsan verb love Li miss
 'Zhangsan loves Miss Li very much.'
- b. Ta hen xinshang nei-fu hua
 he very appreciate that-cl. painting
 'He appreciates that painting very much.'

- [4] This semantic difference was first observed by Leech (1969:125-26). The different readings involved in (15), on the other hand, are distinguished in Chinese by means of different quantified expressions, as shown in (1):

- (1) a. Ta da men da le₁ san-ci
 he knock door knock le₁ three-occasion

b. Ta da men da le₁ san-xia
 he knock door knock le₁ three-knock

'San-ci' ('three-occasion') in (1a) refers to three different occasions, whereas 'san-xia' ('three-knocks') in (1b) refers to three knocks on a single occasion.

- [5] The use of articles in English as markers of temporal boundedness of objects can further be shown by the fact that both accomplishment and achievement sentences in English fall within the sphere of compositional aspect in the sense that the temporal boundedness (or perfectivity) involved in these two types of sentences, as shown in (1), can be converted into 'unboundedness' (or imperfectivity) by one (or more) unquantified objects, as shown in (2).

(1) a. The boy ate an apple. (Accomplishment)

b. The child found a bird. (Achievement)

(2) a. The boy ate apples. (Activity)

b. The child found birds. (Activity)

- [6] It should be mentioned here that Chinese linguists sometimes treat the quantified expression 'yi-ge' ('one-cl.) or 'you yi-ge' ('have-one-cl.') in Chinese as equivalent to the indefinite article in English, and the demonstrative expression 'zhe/nei-ge' ('this/that-cl.') as equivalent to the definite article in English. Although the expressions 'you yi-ge' and 'zhe-ge' in Chinese can be used to render the semantic notions expressed by the indefinite and definite articles in some context, they differ from the latter in one essential respect. That is, they belong to the category of indication, whose primary function is that of pointing.

Kramsky (1972:63) in this connection has mentioned two salient features of articles that are lacking in demonstrative expressions: a) the article is a constant quality of the noun, and b) the article comprises determination plus some element that modifies the meaning of the word.

- [7] The particle 'BA' has been treated as a 'co-verb' by some Chinese linguists (e.g.,

Chao, 1968; Li & Thompson, 1973), but as a preposition by others (e.g., Mei, 1978; S-F Huang, 1974). Etymologically, 'BA' is derived from a verb, meaning 'take hold of/grab'. According to M-K Gao (1940:69), in a construction where the marker 'BA' is used as a 'quasi-verb', the word 'BA' is followed by a main verb which expresses the predominant action by the subject, and the word 'BA' serves to indicate a secondary action. However, it refers to the same action.

[8] Wierzbicka (1980b:101) cited this set of equations for perception verbs from Iordanskaja (1979). The other perception verbs are given as follows:

- (1) a. to smell - to perceive by the nose;
- b. to taste - to perceive by the mouth;
- c. to feel - to perceive by the body.

The Chinese equivalents of these perception verbs are also composed of two parts, as shown in (2):

- (2) a. xiu-dao ('sniff-perceive') ('smell')
- b. chang-dao ('savour-perceive') ('taste')
- c. chu/mo-dao ('touch-perceive') ('feel')

[9] The English translation is taken from POLA (Project on Linguistic Analysis 1.4:61-102).

It should be mentioned here that H. Wang (1959), following Wang Li (1944), treated the BA-construction in terms of the effect on (i.e., disposing of) the object. Hence, BA-sentences are also called 'Disposal/Execution' forms.

[10] The terms 'actual' and 'virtual' used by Teng (1975) are taken from Frei (1956-57), who first employed this distinction in the interpretation of the object in the BA-construction. According to Frei (1956:84), "the referent corresponding to the complement of 'BA' is always meant as 'actual', never as 'virtual'; this complement forms an 'indication', and not a characterization".

Chapter VII

CONCLUSION

In this study I have tried to address a number of recalcitrant problems in several important areas of Chinese grammar, including aspect markers, verb classifications, verb-object compounds, resultative verb compounds, and the BA-construction. Fundamental to the investigation of the above areas is the notion of 'internal time reference', which is divided into two parts, namely, 'aspect' and 'aktionsart'. The former indicates the way a speaker chooses to present a situation in relation to time, whereas the latter concerns the inherent temporal constitution of a situation. The separation of 'aspect' from 'aktionsart' has enabled us to give a coherent semantic description of Chinese sentences with respect to the conceptualization of time.

First, the system of temporal reference in Chinese was discussed. I have shown in Chapter 2 that the role played by the aspect markers in Chinese in defining the temporal specification of a sentence is to establish the anchoring point of an event on the time axis. However, central to the analysis of the semantic issues involved in the Chinese sentences is the notion of 'aktionsart', i.e., the intrinsic temporal nature of a sentence. In this regard, the internal structure of verbs in Chinese plays an important role in the interpretation of the inherent temporal nature of a sentence. I have demonstrated in Chapter 3 that Chinese has a 'non-directed' verbal content: that an event referred to in a sentence is interpreted as being confined inside a time-sphere. That is, an event is treated as a self-enclosed unit of happening, which is presented either wholly or partially. The direct consequence of the 'non-directed' verbal content of Chinese

verbs is the 'compositional' nature of semantic representation involved in a sentence in the sense that the semantic features of each constituent combine together and form the meaning of the whole unit. Compound verbs in Chinese in this connection offer a good example of the 'compositional' nature of a sentence in relation to the interpretation of its inherent temporal nature. The semantic issues related to two types of compound verbs in Chinese - namely, verb-object compounds and resultative verb compounds - have been discussed in detail in Chapters 4 and 5 respectively. Finally, I have shown in Chapter 6 that the semantic problems involved in the BA-construction have to do with its intrinsic temporal properties.

The 'non-directed' nature of Chinese verbs has far-reaching implications for the analysis of Chinese grammar. The direct result of this is that in Chinese the semantic representation of a sentence is explicitly represented in the (surface) syntactic structure. This semantic transparency has a significant effect on the (syntactic) word order of a sentence in Chinese. In a word, the syntactic word order of a sentence in Chinese is a direct reflection of its semantic representation.

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