

THE PREVERBAL NPs IN CHINESE

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ZHONG-YING LU



THE PREVERBAL NPs IN CHINESE

BY

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ABSTRACT

This thesis is a study of the syntactic structures of Chinese preverbal NPs, which is one of the prominent characteristics of the Chinese language. Chapter two displays various preverbal NPs in Mandarin Chinese, which are derived from the basic word order. In this chapter, the most important preverbal NP, subject (pre-S), is explained within the generative grammar framework.

Chapter three investigates fronted objects in the position between the subject and the verb (pre-O), and presents some licensing conditions for such preverbal objects. It is also shown that there is a semantic restriction, i.e., subject-object substitutability, that obstructs object movement.

Chapter four discusses topicalization in Mandarin Chinese. It is claimed that the topic in topicalization (pre-T1) is in the SPEC of CP, leaving a covert trace or overt anaphor that is a resumptive element in the object position. Such a topic differs from the preverbal object because the topic, not the preverbal object, has a comment clause upon which it is predicated, even though they are both theta-marked by the verb.

Chapter five deals with two types of topic: the topic associated with prepositions (pre-T2), and the topic which is an extracted possessor NP (pre-T3). It is argued that every pre-T2 must have an appropriate preposition preceding it in D-structure, and that a pre-T2 is assigned a theta role by the predication through the preposition. This chapter also presents the fact that a pre-T3 is extracted from the subject position quite freely, but that this extraction is restricted in certain cases from the object position. It is shown that there is an interesting similarity between the object movement and the pre-T3 extraction, that is, when the possessor NP is in the object position, subject-possessor substitutability blocks the extraction.

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Abbreviations:

ASP ----->	Aspectual marker (in literal translations) Aspect projection (in tree structures)
CL ----->	classifier
CM ----->	Case marker
MA ----->	marker of Attribute
MS ----->	marker of Supplement
PAS ----->	Passive morpheme
PAST ----->	past Tense
PER ----->	Perfective Aspect
PL ----->	plural suffix
POS ----->	possessive marker
QM ----->	question marker

Chapter One

Introduction

1.1 Preverbal NPs (pre-NPs) in Chinese

Preverbal NPs (pre-NPs)¹ are one of the important properties of Chinese language.² A comparison of English with Chinese shows that Chinese pre-NPs can be characterized as follows:

A. There can exist more than one NP prior to the main verb or predicate besides the subject in a Chinese sentence, but not in English. For instance:

- (1) Zhe wenti jintian guanban sishi ren dou mei fenqi³
this issue today class forty body all have-no divergence
a. 'Today for this issue, none of all the forty people in the class has a divergence'
b. *This issue today the class forty people all have no divergence

There are four NPs in front of the verb mei 'have no' in the well-formed Chinese sentence (1). This is not permitted in a English sentence, as shown in (1b).

B. In many cases the word order of pre-NPs in a Chinese sentence is flexible, unlike that in English, as shown in (2-4):

- (2) Xuesheng-men wancheng-le gongke
student CL finish PER exercises
'The students have finished the exercises'
(3) a. Gongke xuesheng-men wancheng-le
exercise student CL finish PER
'The students have finished the exercises'

- b. *The exercises the students have finished
(It is unacceptable in normal intonation.)
- (4) a. Xuesheng-men gongke wancheng-le
student CL exercise finish PER
'The students have finished the exercises'
- b. *The students the exercises have finished

The NP gongke 'exercises' can appear either after the verb as in (2), before the subject as in (3a), or even between the subject and the verb as in (4a); but apart from the normal order of (2), the English examples (3b) and (4b) are all ungrammatical sentences.

C. The pre-NPs in (1) are not all obligatory in the sentence. Given sufficient context, one can drop any, even all of them. Therefore, the sentences in (5), all variants of (1), are grammatical in Chinese:

- (5) a. Zhe wenti dou mei fenqi
this issue all have-no divergence
'There is no divergence for this issue'
- b. Sishi ren dou mei fenqi
forty body all have-no divergence
'All of the forty people have no divergence'
- c. Jintian dou mei fenqi
today all have-no divergence
'Today there is no divergence'
- d. Mei fenqi
have-no divergence
'There is no divergence'

As one of the Sino-Tibetan languages, Chinese has little inflectional morphology in its sentences, so the presence of numerous pre-NPs cannot be explained as being only controlled by overt grammatical features. This thesis will investigate those pre-NPs and attempt to determine the licensing conditions to account for their distribution.

1.2 An Overview of the Previous Research

1.2.1 The Controversy About Subject & Object

In 1955, pre-NPs were first discussed in Chinese linguistic circles in P. R. China, as part of the question of what were subject and object in Chinese. Because of the many pre-NPs in Chinese, it is not easy to determine which NP is subject and which is object in a sentence such as (6):

- (6) Zhe-ben shu wo kan-guo
 thisCL book I readPAST
 'I read this book'

Two different criteria were used to identify subject and object: meaning and word order. In terms of meaning, zhe-ben shu 'this book' is the object of the verb kan 'read', because 'book' refers to the target of the action. In contrast, a word-order approach would view 'book' as the subject of the sentence, since it occurs in the initial position of the sentence.⁴ This debate still continues for discussion (see Lü 1979).⁵

Both criteria appear too simple to explain a complicated phenomenon. In Chinese, there are a number of sentences such as (7) below:

- (7) Zhe-jian shi Zhangsan hen you jingyan
 this CL thing Z. very have experience
 'With this thing, Zhangsan has much experience'

Using meaning as the determining factor, we find it difficult to explain what grammatical function the initial NP 'this thing' has in (7). It cannot be either the object of the verb, or the subject of the sentence, because the verb 'have' already has

'experience' as its object, and Zhangsan is the subject since Zhangsan is the possessor of 'experience'. According to the criterion of order, 'this thing' is the subject. This creates a problem, however, since in sentences (8) and (9) which have exactly the same meaning as (7), the subjects must each be different:

- (8) Zhangsan zhejian shi hen you jingyan
 Z. this CL thing very have experience
 'Zhangsan has much experience with this thing'
- (9) Dui zhejian shi Zhangsan hen you jingyan
 to this CL thing Z. very have experience
 'With this thing, Zhangsan has much experience'

In (8) Zhangsan, based on word order, is the subject instead of 'this thing', the subject in (7). Even less reasonable is the conclusion, according to this criterion, that in (9) the prepositional phrase 'with this thing' is the subject. Obviously, such a notion of subject is too extensive to be a useful linguistic definition.

A breakthrough came when Chao (1968) proposed the term "topic" to explain some pre-NPs in Chinese. In terms of Chao's approach, the subject-predicate relation usually represents actor-action meaning; "but in Chinese, the proportion of applicability of the actor-action meanings, ..., is still very low, perhaps not much higher than 50 per cent, and the wider conception of topic and comment is much more appropriate" (p. 70). Chao also says (p. 69): "The grammatical meaning of subject and predicate in a Chinese sentence is topic and comment", in other words, he equates topic and subject. His main purpose in proposing "topic" is to refer those pre-NPs other than "actors". Chao distinguishes between main

subject and clause subject (pp. 95-6). In terms of Chao, a full sentence can be the predicate of another subject that is the main subject, while the subject in the predicate is a clause subject. According to this view, pre-NPs in fact appear at different levels in a sentence.

Li & Thompson (1976) take up the term 'topic', but distinguish topic from subject in Chinese. Li & Thompson claim (1981:15): "One of the most striking features of Mandarin sentence structure, and one that sets Mandarin apart from many other languages, is that in addition to the grammatical relations of 'subject' and 'direct object,' the description of Mandarin must also include the element 'topic'. Because of the importance of 'topic' in the grammar of Mandarin, it can be termed a topic-prominent language." Li & Thompson (1976:461-66) use seven criteria to distinguish between a topic and a subject as follows:

- (10) a. Topics must be definite.
- b. A topic need not have a selectional relation with any verb in a sentence.
- c. Verb determines "Subject" but not "Topic".
- d. The functional role of the topic is constant across sentences.
- e. Topic-predicate agreement is very rare.
- f. The surface coding of the topic always involves the sentence-initial position.
- g. The reflexive pronoun generally marks a co-referential relation with the subject of the sentence.

Such criteria lay a foundation for topic to be a constituent of a sentence.

1.2.2 Pre-NPs Within the Generative Grammar Framework

In the 1980s, a number of linguists analyzed Chinese within a generative grammar framework. Pre-NPs have been discussed in some of these works.

Huang (1982) claims that there are two types of topic in Chinese: those which can be naturally analyzable as derived from the underlying subject-predicate sentence by movement as in (11) and (12) below, and those which must be base-generated in the initial position of the sentence as in (13) and (14) below:

- (11) Zhangsan, ta zhidao wo xihuan t_i (Huang (1982:87))
 Z. he know I like
 'Zhangsan, he knows I like'
- (12) Zhangsan de baba, ta hen zunjing t_i (Huang (1982:87))
 Z. POS father he very respect
 'Zhangsan's father, he respects very much'
- (13) Shuiguo, wo zui xihuan xiangjiao (Huang (1982:86))
 fruit I most like banana
 'As for fruit, I like banana most'
- (14) Tamen, wo kan ni, ni kan wo (Huang (1982:87))
 they I see you you see I
 'They looked at each other'

In terms of Huang's approach, the underlined topics in (11) and (12) are derived from the object position when the topics and the subjects are disjoint in reference, leaving coindexed traces behind. The underlined NPs in the initial position of (13) and (14) are base-generated there in situ, because there is no plausible source position for them in the sentences. This is an important distinction for the study of pre-NPs in Chinese.

Word order is another important aspect to pre-NPs. Travis

(1984) assumes that word order of Chinese is determined by the parameters of head-initial / head-final and the direction of theta role and Case assignments, which I will discuss in detail in 2.1.1.

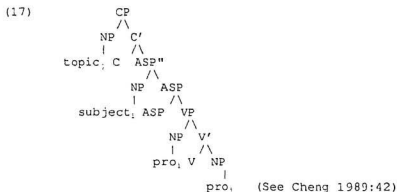
Xu & Langendoen (1985) gave a formulation for Chinese topic structures as shown in (15), based on "six major categories" that can appear in topic position, which I cite in (16) below:

- (15) [_S X [_S... Y...]], where X is a major category and Y, possibly empty, is related to X. (X. & L. 1985:20)
- (16) a. Zhexie hua wo bu xiangxin (NP) (X. & L. 1985:5)
 these words I not believe
 'These words, I don't believe'
- b. Ta hui shuo zhexie hua wo bu xiangxin (S)
 he can say these words I not believe
 'That he could have said these words, I don't believe'
- c. Zhexie hua ta hui shuo wo bu xiangxin (S')
 these words he can say I not believe
 'That these words he could have said, I don't believe'
- d. Zai zhuozi shang ta fang le jiben shu (PrepP)
 at table on he put PAST some book
 'On the table, he put some books'
- e. Zhuozi shang you shu, chuang shang meiyou shu (PostP)
 table on have book bed on not book
 'On the table there are some books; on the bed there are no books'
- f. Shuo zhexie hua wo bu zancheng (VP)
 say these words I not approve-of
 'Saying these words, I don't approve of'

Xu & Langendoen (1985:27) claim that the formulation of (16) provides an adequate account of the nature of topic structures in Chinese, provided that the comment is a well-formed clause which relates to the topic. Under this view, all topics are base-generated.

Cheng (1989) argues that both topic and subject are base-

generated and linked to empty pro position in object and SPEC of VP respectively, as shown below:



She assumes that such an empty pronominal --pro-- is licensed by Aspect in the sentences.

All of the previous research has made contributions to the question of pre-NPs⁵. In my opinion, however, there are some major problems that remain to be solved concerning this issue. For instance, how many types of pre-NPs are there in Chinese? What is the distribution of these pre-NPs? What are their structural positions? What licenses them? This thesis will try to deal with these questions.

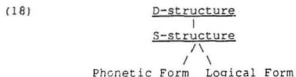
1.3 Theoretical Assumptions

In this thesis I will be using traditional notions of generative grammar framework, i.e., the so-called GB (Government and Binding) theoretical approach to syntax, developed in Chomsky (1981, 1982 and 1986a)). In this section I will briefly outline some fundamental concepts and principles of GB theory that will be

involved in the following chapters.

1.3.1 Grammatical Model and X' Theory

In generative grammar, four components of the grammar produce sentences, as in the following model:



D-structure is related to S-structure by a set of movement rules known as Transformations, and S-structure is related to the interpretive components Phonetic Form (PF) and Logical Form (LF). PF provides the acoustic properties while LF the semantic ones to the input S-structure.

D-structure is the level of representation that satisfies the requirements of X' theory, i.e.:

- (19) a. Every projection X^n has a lexical head.
 b. X^n immediately dominates X^{n-1} (down to X^0)

Those can be schematized as follows:⁷

- (20) a. $X^n \rightarrow X', (YP)$ (Specifier Rule)
 b. $X' \rightarrow X', YP$ (Adjunct Rule) - optional
 c. $X' \rightarrow X, (YP)$ (Complement Rule)

1.3.2 Binding and Subjacency Conditions

Binding Conditions proposed by Chomsky (1981:188) govern necessary or possible anaphoric relations between different NPs in a sentence as follows:

- (21) a. An anaphor is bound in its governing category.
 b. A pronominal is free in its governing category.
 c. An R-expressions is free.

The trace of NP movement is neither a R-expression nor a pronominal, but is an anaphor.

Movement from a position that is potentially a recipient of a theta role to another such position (for example, from object position to subject position) is called A-movement of A-position by Chomsky (1981). The item that undergoes A-movement and its trace(s) together form an A-chain. Wh-movement, on the other hand, is movement to an A'-position, which is a non-argument position. Various constraints have been proposed on the application of these two rules, which are collapsed into a single rule, Move α . The most important constraint is Subjacency Condition:

- (22) A single instance of movement can cross at most one bounding node, where the bounding nodes are IP and NP.

This condition basically disallows moving something too far in one operation of movement.

1.3.3 Case Filter

In terms of the generative grammar, Case is an abstract concept instead of the morphological one in traditional approach. Any NP in a structure has to have a Case, which does not need a phonetic form. Vergnaud (1974) claims that an NP without a Case is ungrammatical. This is the well-known Case Filter:

- (23) At S-structure, every lexical NP needs a Case.

Accusative Case is assigned by a verb to its object, oblique Case is assigned by a preposition to its complement, and nominative Case is assigned by INFL to the subject.

1.3.4 Theta Criterion

Chomsky (1981) claims that all complements of a head and some subjects are theta-positions, and an argument in a theta-position must be assigned a theta role by its head in LF. So Chomsky (1981:36) proposes the Theta Criterion as shown below:

- (24) a. Each Argument bears one and only one theta role.
 b. Each theta role is assigned to one and only one Argument.
- In general, the semantics of, say, a verb or a preposition should determine its thematic properties.

1.3.5 Empty Category Principle

Any movement results in a trace, which is an empty category in the sentence. Chomsky (1981) explains the syntactic relation of the trace to the sentence by Empty Category Principle (ECP), which also restricts the α movement itself:

- (25) A trace must be properly governed.

There are two ways in which a trace can be properly governed as follows:

- (26) a. A properly governs B iff A theta-governs B or A antecedent-governs B. (cf. Chomsky (1986b:17))
 b. A theta-governs B iff A governs B and A theta-marks B.
 A antecedent-governs B iff A governs B and A is co-indexed with B.

1.3.6 Licensing Principles

Since every lexical entry that appears in a well-formed structure must be licensed in one or more available ways, licensing theory is a synthetical application of other principles in generative grammar. Chomsky (1986a) outlines some licensing principles which include, among others, the following options.

According to ECP, a trace must be properly governed, in other words, a variable must be strongly bound and the referential dependency must meet the conditions of binding theory. So Chomsky (1986a:93) claims that:

- (27) An operator is licensed by binding a variable, from which it is not 'too distant', in a certain well-defined abstract sense.

The Theta Criterion stipulates that a element which assigns theta roles must have recipients in appropriate positions, and an element which requires a theta-role must be assigned such a role; therefore, each complement of a head must be semantically selected.

- (28) An element that violates the Theta-Criterion must not be licensed in any structure.

At S-structure level, every lexical NP needs a Case in terms of Case Filter, from which we have the following licensing principle:

- (29) A lexical argument must have a Case, or it will not receive a theta-role and will not be licensed.

In addition, Chomsky (1986a:98) proposes a licensing principle called Full Interpretation (FI) which requires that:

- (30) Every element of PF and LF, taken to be the interface of syntax (in the broad sense) with system of language use, must receive an appropriate interpretation.

All the concepts and principles outlined above are applicable to Chinese syntax and will be adopted in the discussion of pre-NPs in Chinese.

Footnotes to Chapter 1:

¹ The term "preverbal NPs" in this thesis is to be understood as NPs occurring in preverbal position without prepositions.

² Even though there are some differences among the eight dialect groups of Chinese, they basically share similar grammar and vocabulary. Mandarin is the standard dialect used by a majority of speakers in China, so when I mention "Chinese", this should be understood as referring to "Mandarin".

³ Jintian 'today' in Chinese is a noun, since jintian 'today' in Chinese can have a preposition, e.g., zai 'on' before it. For example:

- (i) Women jiu zai jintian dongshen
 we just on today leave
 'We are leaving just today'

⁴ According to the criterion of order, the element in the initial position, no matter what it is, must be the subject of the sentence.

⁵ The major grammarians who agreed with the criterion of meaning were Lü (1942/1956), Wang (1956) and Zhang (1959); and who preferred the criterion of word order were Ding (1961), Xing (1955) and Hu (1979).

* I will discuss these approaches in more detail in the following chapters.

⁷ The notation 'X, Y' indicates an unordered set.

Chapter Two

Base-generation of Pre-NPs

2.1 Basic Word Order & Movement

In this chapter, I will discuss the base-generation of certain pre-NPs in Chinese, so first of all, the basic Chinese word order must be established.

2.1.1 SOV or SVO?

There are traditionally six basic elements to form Chinese sentences: subject (S), predicate (V)', object (O), attribute (A), adverbial (Adv) and supplement⁷. The basic word order of these constituents is fairly clear in the language of Chinese. The question remains as to what is the linear sequence of V and O; in other words, is Chinese a SOV or a SVO language? Li & Thompson (1974a, 1975,) claim that modern Chinese is changing from SVO to SOV, while Light (1979) argues that it is SVO.

Li & Thompson (1974a:200-206) summarize their findings of word order change as follows:

- A. Archaic Chinese --> Modern Chinese
S + V + PP S + PP + V

(1) a. cong you gu chulai (L. & T. 1974a:202)
 from dark valley emerge
 'emerges from dark valley'

- B. The emergence of the ba-construction

- b. Zhangsan ba Lisi piping le (L. & T. 1974a:203)
 Z. BA L. criticize PAST
 'Zhangsan criticized Lisi.'
- C. The emergence of the bei-construction
- c. Zhangsan bei Lisi piping le (L. & T. 1974a:204)
 Z. BEI L. criticize PAST
 'Zhangsan was criticized by Lisi'
- D. The emergence of compounds
- d. chuang-shang (L. & T. 1974a:205)
 bed -on
 'on the bed'
- E. The general shift of verb-object constructions to preposition-object-verb constructions
- e. cong fangzi chulai (L. & T. 1974a:205)
 from house out-come
 'come from the house'

Since none of the above involves a bare preverbal NP, it is hard to identify the modern Chinese as a SOV language. In (1a), (1b) and (1e), there are prepositions cong and ba in front of the preverbal NPs which are actually preverbal PPs. Travis (1984) points out that the difference between preverbal and postverbal PPs is that in the former, the preverbal NP is theta-marked by the preposition independently, while in the latter the postverbal NP is theta-marked by the verb. Li & Thompson ignore the crucial fact that prepositions play a large role.¹ Zhangsan in (1c) is the subject of a passive sentence, not a preverbal object. As for chuang-shang 'on the bed' in (1d), I assume the analysis of the final shang as a nominal suffix rather than a preposition, as Travis (1984:42) says: "The postpositions are nominal in nature while the prepositions are true adpositions". So chuang-shang can

be treated as a single word rather than a phrase.

A language in a different historical period has its own parameters, which change over time, nevertheless, it is difficult to state categorically that Chinese is changing from SVO to SOV. Even archaic Chinese had a number of instances in which O had to occur between S and V (see Wang (1962/1979), Yang (1963)), though its basic word order is SVO. These are as follows:

A. The object is a pronoun and the verb is negated by bu 'not', wu 'don't', mo 'none' or wei 'haven't':

- (2) a. 時 不 我 待
 Shi bu wo dai (archaic)
 time not I wait-for
 'Time does not wait for me'
- b. Shijian bu dengdai wo (modern)
 time not wait-for I
 'Time does not wait for me'

B. The object is an interrogative pronoun, which is explained by Li & Thompson as vestiges of "an SOV pre-Archaic Chinese" (Li & Thompson 1974a:208), as shown below:

- (3) a. 臣 實 不 才, 又 誰 敢 怨.
 Chen shi bu cai, you shui gan yuan? (archaic)
 subject really not talent but who dare blame
 'I am really not a talent, but whom dare I blame?'
- b. Wo dique meiyou caigan, dan gan yuan shui ne? (modern)
 I indeed no talent but dare blame who QM
 'I am indeed not a talent, but whom dare I blame?'

C. The preverbal object has a resumptive demonstrative pronoun coindexed with it in some sentence:

- (4) a. 宋 何 罪 之 有
 Song he zui, zhi, you? (archaic)
 country name what guilt this have
 'What guilt does Song have?'

- b. Songguo you shenme zui? (modern)
 S. have what guilt
 'What guilt does Song have?'

All these sentences have to be SVO in modern Chinese as shown in (2b), (3b) and (4b). This shows that archaic Chinese is not more SVO than modern Chinese. However, this is not to say that modern Chinese is a strict SVO language. In fact, under certain marked conditions there are cases in which modern Chinese has SOV structures (I will discuss these in Chapter 3).

I concur with the statement made by Travis (1984:59) that "confusion can arise when languages are characterized simply as either SVO or SOV". Travis (1984) goes on to set the parameters of head-initial/final, leftward/rightward theta-marking, and leftward/rightward case-marking to explain the word order of languages in every stage. She (1984:61) says:

- (5) In terms of parameter, however, there is nothing unstable. Chinese is not between stages, but rather at a specific stable point.

Chinese language has changed over its long history, for example, PPs have become preverbal in modern Chinese from postverbal in archaic Chinese. Nevertheless, it is hard to see the change as one from SVO to SOV. It seems to me that both archaic Chinese and modern Chinese have the same basic word order, and also have their own different parameters.

Huang (1982:26) suggests that:

- (6) The basic word order of a Chinese sentence is subject-verb-object, with adverbial modifiers most generally occurring between the subject and the verb.

In Chinese, the surface order of constituents can be represented as

in (7), in light of Huang's description:

(7) S-Adv-V-O

This is the representation of Chinese basic word order which is unmarked both in archaic and modern language. I will adopt it in this thesis.

2.1.2 Basic Word Order in Chinese

Following Li & Thompson (1981), I assume that the topic, in addition to the six elements mentioned in 2.1.1 above, must be taken into account while talking about the basic word order of Chinese.

Based on Huang's description of word order given in (7) above, we can give six statements to describe the basic word order in modern Chinese as follows.

A. The subject precedes the predicate, which may be VP, AP or NP in Chinese.

B. The object follows the verb or a preposition.

C. Preceded by a marker de (MS), the supplement always follows the verb or an adjective. For example:

(8) Zuowan wo shui de hen chen
last-night I sleep MS very sound
'I was sound asleep last night'

(9) Zhe-duo hua hong de zheng ke'ai
this CL flower red MS really lovely
'The red color of this flower is really lovely'

D. Adverbials usually occur in the position between the subject and the verb.

E. The topic appears in the initial position of the

sentence, even before the subject. For instance:

- (10) Zhe-tian shi Zhangsan hen you jingyan
 this CL thing Z. very have experience
 'With this thing, Zhangsan has much experience'
- (11) Mali zhangfu chuguo le
 Mary husband go-abroad PAST
 'Mary, her husband went abroad'

F. The noun phrase is head-final as in below:

- (12) meili de hua
 beautiful MA flower
 'a beautiful flower'
- (13) Lisi sheji de fangzi
 L. design MA building
 'a Lisi-designed building'

2.1.3 Movement of Pre-NPs

The statements of basic word order above are realized in the majority of Chinese sentences. I will assume that the basic word order represents the D-structure of sentences in general. However, this word order has variants; that is, the derived forms where one or more elements moves from the basic position to other ones. The most important types of movement related to pre-NPs are object movement to the position between the subject and the verb, and the topicalization.

Under certain conditions, which I will discuss in Chapter 3 and Chapter 4, an object can be moved to either the medial position between the subject and the verb or the initial position of the sentence. For example:

- (14) a. Wo kan-guo zhe-ben shu le
 I read PAST this CL book PER
 'I have read this book'

- b. Wo zhe-ben shu, kan-guo t, le
 I this CL book readPAST PER
 'I have read this book'
- c. Zhe-ben shu, wo kan-guo t, le
 this CL book I readPAST PER
 'This book, I have read'

The object 'this book' in (14a) is moved to the medial position in (14b) and to the initial position in (14c).

Topicalization is much more common than the movement to the medial position, and is an important linguistic phenomenon in Chinese, recognized by many scholars (Chao 1968, Li & Thompson 1976, Huang 1982, Xu & Langendoen 1985 and Cheng 1989 among others). There is no consensus, however, about which position the topic originates in. I will discuss this further in Chapter 4.

There is another type of topic which is a possessor of another NP in the comment clause. A typical sentence with such a topic is shown below:

- (15) Xiang bizi hen chang
 elephant nose very long
 'Elephant, its nose is very long'

Huang (1982, 1984) claims that such a topic is extracted from the NP headed by 'nose' in the comment clause, which has the structure of (16) in below:

- (16) Xiang, [t, bizi] hen chang
 elephant nose very long
 'Elephant, its nose is very long'

In this thesis, I will argue that pre-NPs in topicalization, in medial position, and possessors such as that in (16) are derived

from another position, assuming the Chinese basic word order described above.

2.2 Subject in Chinese (Pre-S)

The most important pre-NP in Chinese is subject, which is the most frequently occurring pre-NP. First of all, I will identify the subject in Chinese within the framework of generative grammar.

2.2.1 Subject in Generative Grammar

In traditional grammar, subject, object and predicate are fundamental constituents of a sentence, while within X-bar theory, linguists focus on the structural position of a particular NP in a maximal projection X", instead of relying on the primitive notions of subject and object. Chomsky (1986a:59) makes a brief description for subject and object:

- (17) The grammatical function "subject-of" can be defined as "NP of S" (i.e., NP immediately contained in S).... The grammatical function "object of" can be defined similarly as "NP of VP".

According to this definition, a subject is just the specifier (SPEC) of a X" as shown in (18):

- (18)
- $$\begin{array}{c} X'' \\ / \quad \backslash \\ SPEC \quad X' \end{array}$$

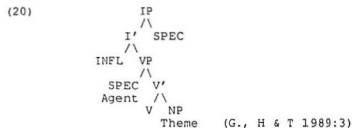
In English there is an I which heads every sentence, so the subject of an English clause is an NP such as the one in (19):

- (19) [_CCOMP [_SNP [_{NP2} INFL [_{VP} V...]]]] (Chomsky 1986a:161)

Hence subject is an argument that is assigned Case by I, whereas object is an argument that is assigned Case by the verb in

generative grammar.

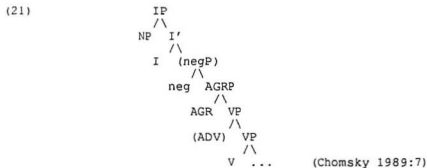
Guilfoyle, Hung & Travis (1989) propose the D-structure of Malayo-Polynesian languages, which seem to be head-initial, as shown in the following:



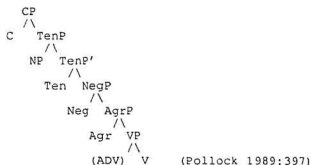
In terms of this tree structure, a subject can occur in either of two positions: the SPEC of VP and the SPEC of IP. A subject is assigned a theta role in the SPEC of VP, while in the SPEC of IP, an NP is assigned a Case.

2.2.2 ASP" and Subject in Chinese

Chomsky (1989), as well as Pollock (1989), propose a kind of articulated structure for an English or a French sentence, where Tense, Agreement and Negation each head their own projection as follows:



(22)



Under this view, the traditional Auxiliary parts of a sentence are analyzable as branched nodes such as TenP, NegP and AgrP.

Because there is little inflectional morphology in Chinese, the projection in a Chinese sentence is different from those in English or French. Following Cheng (1989), I claim that the head of a Chinese sentence is an ASP that assign Case to the subject.

In Chinese I find it difficult to distinguish Aspect from Tense. Le is usually treated as a marker of Perfective and guo as a marker of Past in Chinese. For example:

- (23) Zaofan wo yijing chi-le
 breakfast I already eat PER
 'I have already had my breakfast'

- (24) Wo 1981 nian qu-guo Beijing
 I 1981 year go PAST Beijing
 'I went to Beijing in 1981'

But in (25) le indicates Past and in (26) guo is more like a Perfective morpheme:

- (25) Wo 1981 nian qu-le Beijing
 I 1981 year go PAST Beijing
 'I went to Beijing in 1981'

- (26) Wo qu-guo Beijing
 I go PER Beijing
 'I have been to Beijing'

It is difficult to see what difference there is between them. Sometimes, le can occur with quo, or occur twice in a same sentence:⁴

- (27) a. Wo chi-quo zaofan le b. Wo chi-le zaofan le
 I eat ? breakfast ? I eat ? breakfast ?
 'I have had my breakfast' 'I have had my breakfast'

It is impossible to identify which le is Perfective and which one is Past. We even do not know if the le in (28b) is the one after the verb or the one at the end of the whole sentence in (28a):

- (28) a. Ni chi-le zaofan le ma? b. Chi(-)le
 you eat ? breakfast ? QM eat ?
 'Have you had your breakfast?' 'Yes, I have'

Therefore, it is more reasonable to view the particles such as le and quo as portmanteau morphemes which are all called ASP in this thesis. Besides le and quo there are two other ASP morphemes in Chinese, namely de and zhe, as in the following sentences:

- (29) Shui kai-de chuang?
 who open ASP window
 'Who opened the window?'

 (30) Tamen tan-zhe hua
 they talk ASP speech
 'They are having a talk'

A sentence does not necessarily have an overt ASP morpheme in Chinese. In many cases an ASP is a zero form in a sentence, but no sentence can be acceptable without an ASP or with a wrong ASP, as shown below:

- (31) a. Parent: pro Fang xue le ma?
 (you) finish school ASP QM
 'Have you finished classes?'

 b. Child: pro Fang xue le
 (we) finish school ASP
 'Yes, we have'

- c. *pro Fang xue
 (we) finish school
 (Nonsensical)
- (32) a. Teacher: pro Fang xue ma?
 (we) finish school QM
 'Should we finish school?'
- b. Dean: pro Fang xue!
 (we) finish school
 'Yes, we do'
- c. *pro Fang xue le
 (we) finish school ASP

In (31) all sentences need Perfective Aspect which is indicated by le, so the lack of Perfective accounts for the ill-formedness of (31c). In (32) the sentences need Imperfective Aspect which is in zero form, hence (32c) is ungrammatical due to the wrong Perfective morpheme le.

Thus, following Cheng (1989), I propose that every sentence must have a node of ASP, and the subject is the SPEC of ASP", as in the following tree structure:

- (33)
- ```

 ASP"
 /\
 SPEC ASP'
 /\
 ASP VP
 /\
 (ADV) VP
 /\
 V NP

```

At S-structure, Aspect moves down to VP<sup>3</sup>.

### 2.2.3 Subject and Verbs

In a sentence with a transitive verb, where there are two arguments, the subject is normally the Agent; however, the subject in sentences with intransitive verbs, such as fazhan 'develop',

zhengqia 'increase', kai 'open', guan 'close', sheng 'lift', chen 'sink', etc., is not always clear. All these verbs have transitive counterparts, as exemplified below:

- (34) a. Jingji fazhan-le  
economics developASP  
'The economics has developed'
- b. Women fazhan-le jingji  
we developASP economics  
'We have developed the economics'

To complicate matters, the objects of these transitive sentences can be moved to the medial position of the sentence; for instance, (34b) can have the variant (35) below:

- (35) Women jingji fazhan-le  
we economics developASP  
'We have developed the economics'

Which is the subject of (35), 'we' or 'economics'?

Recently, linguists have distinguished intransitive verbs between unaccusative and ergative (see Perlmutter 1978, Burzio 1981 among others). The crucial differences between them are that an unaccusative verb does not have a transitive counterpart but an ergative one does. Such an approach provides us with a theoretical basis to answer the above question.

In Chinese, if the verb of a sentence is unaccusative, it is clear that the pre-NP is the subject since it is the only argument that is always in front of the verb. The common unaccusative verbs in Chinese are xiuxi 'rest', shibai 'fail', daolai 'arrive', jugong 'bow', etc.. Those for which it is difficult to determine the grammatical relations of the arguments, as in (34) and (35), are ergative verbs, which have their transitive counterparts.

Haegeman (1991) argues the NP before an ergative verb should be the subject at both D-structure and S-structure, as cited in (36) below:

(36) a. The boat sank (Haegeman 6.1 (80c))

b. [<sub>NP</sub> the boat [<sub>VP</sub> past [<sub>VP</sub> sink]]] (Haegeman 6.1 (92))

When there is just one NP argument appearing before an ergative verb, following Haegeman, I will assume that this NP is the subject. Thus, sentence (34a) has the D-structure in (37):

(37)

```

 ASP"
 /\
 NP ASP'
 | /\
 jingji ASP VP
economics | |
 | |
 le fazhan
 develop
'The economics has developed'
```

But when there is another theta marked NP in the initial position, as in (35) above, i. e., the transitive pattern instead, then, the theme jingji 'economics' is a moved object, but not a subject. This means that the sentence such as (34a) is different from the sentence such as (35) which is simply derived from (34b) by object movement, as is normal with transitive verbs.

#### 2.2.4 Subject in Active and Passive Sentences

Since some topics of active sentences and subjects of passive sentences both come from the underlying direct object position, sometimes it is not clear whether a certain sentence is active or passive, when the subject of the topicalized sentence is dropped, as in the following:

- (38) a. Xiaotou, women zhuazhu-le t<sub>i</sub>  
 thief we catch ASP  
 'The thief, we have caught'
- b. Xiaotou, zhuazhu-le t<sub>i</sub>  
 thief catch ASP  
 'The thief has been caught'
- (39) Xiaotou, bei zhuazhu-le t<sub>i</sub>  
 thief PAS catch ASP  
 'The thief has been caught'

The subject 'we' in the topicalized sentence (38a) is dropped as in (38b), which has almost the same interpretation as its passive counterpart (39). As a result, some scholars treat sentences like (38b) as passive.<sup>6</sup> If (38b) is a type of passive sentence, then, 'thief' must be the subject of the sentence. On the other hand, If (38b) is a variant of (38a), the pre-NP in (38b) is a topic, instead of a subject.

Li & Thompson (1976) propose that the reflexive pronoun generally marks a co-referential relation with the subject of the sentence, which is also examined by Cole et al (1980) in a variety of languages. Such an approach can be adopted to examine those pre-NPs, i.e., as a subject, the pre-NP must be an antecedent of the reflexive pronoun in the sentence. Observe the following contrast concerning (38b) and (39):

- (40) a. Xiaotou, zhuazhu-le t<sub>i</sub>  
 thief catch ASP  
 'The thief has been caught'
- b. \*Xiaotou, zai ziji, de fangjian-li zhuazhu-le t<sub>i</sub>  
 thief at self POS room-in catch ASP  
 ('The thief has been caught in his own room')

- (41) a. Xiaotou bei zhuazhu-le t;  
 thief PAS catch ASP  
 'The thief has been caught'
- b. Xiaotou zai ziji de fangjian-li bei zhuazhu-le t;  
 thief at self POS room-in PAS catch ASP  
 'The thief has been caught in his own room'

In (40b) the reflexive pronoun 'self' does not allow the pre-NP 'thief' as its antecedent, making the sentence ungrammatical. In (41b), however, the reflexive pronoun allows the pre-NP as its antecedent, so the sentence is grammatical. This evidence shows that 'thief' in (41a) is the subject of the sentence, but in (40a) it is not. This can be seen even more clearly in the examples below:

- (42) a. Xiaotou women zhuazhu-le t;  
 thief we catch ASP  
 'We have caught the thief'
- b. \*Xiaotou zai ziji de fangjian-li women zhuazhu-le t;  
 thief at self POS room-in we catch ASP  
 ('We have caught the thief in his own room')
- c. Xiaotou women; zai ziji de fangjian-li zhuazhu-le t;  
 thief we at self POS room-in catch ASP  
 'We have caught the thief in our own room'

In the topicalized sentences in (42), only the subject 'we', but not the topic 'thief', can be the antecedent of the reflexive pronoun 'self'. But in the passive sentences as in (43) below, 'thief' is the antecedent, even though 'we' is also present:

- (43) a. Xiaotou bei women; zhuazhu-le t;  
 thief PAS we catch ASP  
 'The thief has been caught by us'

the position between the subject and the verb, such as below:

- (47) Ni shenme dou bu zhidao  
you what all not know  
'You know nothing'
- (48) Wo zaofan yijing chi-le  
I breakfast already eat ASP  
'I have already had my breakfast'
- (49) Zhangsan lian Beiji dou qu-guo<sup>8</sup>  
Z. even North-Pole all go ASP  
'Zhangsan has even been to the North Pole'
- (50) Xiaohai ba chuanghu dapo-le  
boy BA window break ASP  
'The boy broke the window'

Type 3 -- Topic from topicalization (Pre-T1) (to be discussed in Chapter 4). A pre-T1 always precedes pre-S and pre-O in the sentence. All of the pre-O's, except for the ba-construction, can be topicalized to be pre-T1s. Sentences (47)-(49) can be changed to (51)-(53) below:

- (51) Shenme ni dou bu zhidao  
what you all not know  
'You know nothing'
- (52) Zaofan wo yijing chi-le  
breakfast I already eat ASP  
'Breakfast, I have already had'
- (53) Lian Beiji Zhangsan dou qu-guo  
even North-Pole Z. all go ASP  
'Even the North Pole, Zhangsan has even been to'

In contrast, not all pre-T1s can be pre-O's (I will show this in Chapter 4).

Type 4 -- Topic derived from prepositional phrases (Pre-T2) (to be discussed in Chapter 5). A pre-T2 is base-generated in the topic position. Such topics allow a preposition to appear before them. Semantically, pre-T2s indicate locatives, instruments or

- b. Xiaotou zai ziji de fangjian-li bei women, zhuazhu-le t<sub>i</sub>  
 thief at self POS room-in PAS we catch ASP  
 'The thief has been caught by us in his own room'

In the final analysis, Chinese passive sentences must be marked by a passive marker such as bei among others,<sup>7</sup> and in a passive sentence a pre-NP which is the underlying object is the subject. A topicalized pre-NP is distinct from a subject.

### 2.3 Varieties of Chinese Pre-NPs

Having determined the basic word order, general rules of movement, and the subject position, we are able to outline the varieties pre-NPs in Chinese language.

Type 1 -- Subject (Pre-S). As analyzed above, subject is the most basic pre-NP in a Chinese sentence. The subject is assigned Case by ASP in order to be licensed, and in most verbal sentences, it is theta-marked by the main verb. The most common subject is in sentences having a transitive verb:

- (44) Zhangsan da-le Lisi  
 Z. hitASP L.  
 'Zhangsan hit Lisi'

Some subjects have an adjectival or nominal predicate:

- (45) Tianqi hen hao  
 weather very nice  
 'The weather is very nice'
- (46) Mary Yingguo ren  
 Mary English person  
 'Mary is an English person'

Type 2 -- Object in the medial position between the subject and the verb (Pre-O) (to be discussed in Chapter 3). Under certain circumstances, several kinds of objects can be fronted to

themes of the comment clause, as exemplified in (54)-(56) respectively:

- (54) (Zai) Jianada dajia bu bi xuexi zhengzhi  
in Canada everybody not have-to study politics  
'Everybody does not have to study politics in Canada'
- (55) (Yong/Nai) zhe-ba dao, Zhangsan sha-le wu-ge ren  
with this CL knife Z. killASP fiveCL person  
'With this knife, Zhangsan killed five people'
- (56) (Guanyu) zhe-jian shi wo mei zhuyi  
about this CL thing I have-no idea  
'About this thing, I have no idea'

Type 5 -- Possessive Topic (Pre-T3). A pre-T3 is extracted from an NP in the comment clause. There is always a possessive relation between a pre-T3 and the head of the NP from which the pre-T3 is extracted, i. e., the pre-T3 is a possessor and the head noun is a possessee, as shown below:

- (57) Zhe-zhang zhuozi tui tai duan  
this CL table leg too short  
'This table, its legs are too short'
- (58) Zhangsan qian bei tou-le  
Z. money PAS steal ASP  
'Zhangsan, his money has been stolen'
- (59) Lisi baba hen you qian  
L. dad very have money  
'Lisi, his dad is very rich'

In (57) 'legs' are parts of 'table'. 'Money' is in Zhangsan's possession in (58) and there is a human relationship between Lisi and 'dad' in (59).

In the rest of the chapters, I will investigate each of these pre-NPs (except for pre-S which I have discussed in 2.2 of this chapter), and will try to explain the syntactic structure and licensing conditions relating to those pre-NPs.



## Footnotes to Chapter 2:

<sup>1</sup> According to the traditional grammar, the majority of Chinese sentences have a verb as their predicate, so I use "V" as the abbreviation of Predicate.

<sup>2</sup> The term "adverbial" in Chinese traditional grammar includes all preverbal prepositional phrases. The term "supplement" is traditionally called "complement" (Chao (1968), Zhu (1982), Hu (1984), etc.). In order to avoid confusing it with the term "complement" within the generative grammar, I call it "supplement" in this thesis. Supplement will be shown in examples (8) and (9).

<sup>3</sup> A preverbal PP should be distinguished from a preverbal NP. The preposition plays an important role in word order changes in Chinese. See Sun and Saxon (1989).

<sup>4</sup> An analysis of the difference between Aspect and Tense in Chinese is beyond the scope of this work.

<sup>5</sup> Note that in Cheng's (1989) article Aspect moves down to the verb not VP.

<sup>6</sup> Hu (1979), Liu (1983) and Lü (1984).

<sup>7</sup> Other passive markers in Chinese that function as bei are rang, gei, jiao, you, etc..

<sup>8</sup> Qu 'go' in Chinese is a transitive verb which can take a locative object.

## Chapter Three

### The Object in SOV Structure (Pre-O)

#### 3.1 Introduction

As described in the previous chapter, the basic word order of Chinese transitive sentences should still be SVO, even though there are some variants. One of the flexibilities of word order involves the cases in which an object can be fronted to the medial position, i.e., subject-object-verb. Since such a pre-NP is still within the maximal projection, I call it preverbal object (pre-O).

As mentioned above, most objects can be topicalized to the position before subjects which I call pre-T1 in Chinese (topicalization will be dealt with in next chapter). Here are some common examples of sentences where (a) is basic SVO word order and (b) represents topicalized objects, shown as below:

- (1) a. Zhangsan qu-guo<sup>1</sup> Lundun, ye qu-guo Bali  
Z. go ASP London also go ASP Paris  
'Zhangsan has been to London as well as Paris'
- b. Lundun, Zhangsan qu-guo t<sub>1</sub>, Bali, ye qu-guo t<sub>2</sub>,  
London Z. go ASP Paris also go ASP  
'Zhangsan has been to London as well as Paris'
- (2) a. Lisi zhidao suoyou shiqing  
L. know all thing  
'Lisi knows everything'
- b. Suoyou shiqing, Lisi dou zhidao t<sub>1</sub>,  
all thing L. all know  
'Lisi knows everything'

- (3) a. Women jianjue fandui qinlue  
 we resolutely oppose invasion  
 'We resolutely oppose invasion'
- b. Qinlue, women jianjue fandui t<sub>i</sub>  
 invasion we resolutely oppose  
 'We resolutely oppose invasion'

Not all of these objects which undergo topicalization to pre-T1 can also appear in the medial position as pre-O's, so the licensing conditions of pre-O must somewhat be different from those pre-T1s. For instance, the objects in (1a) and (2a) can be found in medial position, as in (4) and (5), but the object in (3a) cannot, as in (6):

- (4) Zhangsan Lundun, qu-guo t<sub>i</sub>, Bali, ye qu-guo t<sub>i</sub>  
 Z. London go ASP Paris also go ASP  
 'Zhangsan has been to **London** as well as **Paris**'<sup>2</sup>
- (5) Lisi suoyou shiqing, dou zhidao t<sub>i</sub>  
 L. all thing all know  
 'Lisi knows **everything**'
- (6) \*Women qinlue, jianjue fandui t<sub>i</sub>  
 we invasion resolutely oppose  
 ('We resolutely oppose invasion')

The preverbal objects such as in (4) and (5) are not mentioned by Li & Thompson (1974a) when they discuss Chinese word order changing from SVO to SOV (cf. 2.1.1). As a matter of fact, there are many cases in which the object can be moved up to the medial position between the subject and the verb. Each of the following sentences (7-11) clearly has a pre-O:

- (7) Lisi zixingche, yijing xiuhao t<sub>i</sub>, le  
 L. bicycle already fix ASP  
 'Lisi has fixed the **bicycle**'

- (8) Zhe-ge ren shenme dou xihuan  $t_i$   
 thisCL person what all like  
 'This guy likes **everything**'
- (9) Zai Yingguo wo yi-ge ren ye bu renshi  $t_i$   
 in English I oneCL person also not know  
 'I even don't know a **single** person in English'
- (10) Ta lian 'yi' zi ye bu hui xie  $t_i$   
 he even one character also not can write  
 'He even cannot write the word **one**'
- (11) Zhangsan, huangyou, chi  $t_i$ , e<sub>x</sub> niunai, dao bu chi  $t_i$ ,  
 Z. butter eat milk but not eat  
 'Zhangsan eats **butter**, but does not eat **milk**'

Like the object in postverbal position, a pre-O is governed by the verb, since the pre-O is theta-marked by the verb at D-structure.

In the following sections of this chapter I will discuss the licensing conditions of these pre-O's and propose a semantic restriction for object movement in Chinese. Since most pre-TIs are derived from the object position, the properties of pre-O that will be examined in this chapter are almost all applicable to pre-TIs in topicalization

### 3.2 The Licensing Conditions of Pre-O

Pre-O's in Chinese are fairly complex for they are not all in the same context in the sentences: the pre-O in (7) above occurs in a Perfective Aspectual sentence, the pre-O is a wh-element<sup>3</sup> in (8), not in (9); there is a particle lian before the pre-O in (10), and the two pre-O's must appear in two coordinate SOV structures in

(11). As a result, the licensing conditions of pre-O are not simple.

### 3.2.1 Perfective Aspectual Licensing

More and more evidence proves that Aspect plays a very important role in Chinese syntax. Cheng (1989) assumes that Aspect<sup>i</sup> is the licensor of pro's in Chinese. Following this idea, I further claim that the Perfective Aspect licenses some of the pre-O's in Chinese. As mentioned in 2.2.2, Chinese has two Aspectual morphemes le and guo, which are Perfective, so objects involving either le or guo can be moved to the medial position between the subject and the verb, as shown below:

(12) a. Xuesheng-men zuo(-le) gongke  
 student PL do ASP exercise  
 'The students (have) do(ne) their exercises'

b. \*Xuesheng-men gongke, zuo t<sub>i</sub>  
 student PL exercise do  
 ('The students do their exercises')

c. Xuesheng-men gongke, zuo **le** t<sub>i</sub>  
 student PL exercise do ASP  
 'The students have done their **exercises**'

(13) a. Wo kan (guo) zhe-bu dianying  
 I watch ASP thisCL movie  
 'I watch (have watched) this film'

b. \*Wo zhe-bu dianying, kan t<sub>i</sub>  
 I this CL movie watch  
 ('I watch this film')

c. Wo zhe-bu dianying, kan-**guo** t<sub>i</sub>  
 I this CL movie watchASP  
 'I have watched this film'

The (a) examples in (12) and (13) are sentences without a Perfective in the normal word order, and the objects cannot be fronted, as shown in (b) examples. In contrast, when the sentences contain a Perfective in (c) examples, the pre-O's are permitted. More examples are given below:

- (14) Wo zuqiu zaoyi bu ti le  
 I football already not play ASP  
 'I have already stopped playing football'
- (15) Zhangsan Mei guo qu-guo  
 Z. America go ASP  
 'Zhangsan has been to America'
- (16) Wo zhe-men ke xuan-guo le  
 I this CL course take ASP  
 'I have taken this course'

The evidence shows it is only the Perfective that allows the objects to move up from the regular object position. Since the negative mei 'not yet' includes a Perfective in Chinese, an object in the sentence with a mei can also be fronted, e.g.:

- (17) Wo zhe-ben shu hai mei kan  
 I thisCL book yet not read  
 'I have not yet read this book'

### 3.2.2 Case Markers dou and ye

Unlike Chinese, in Japanese and Korean, where the basic word order of transitive sentences is SOV, there are many postpositional particles which stand as Case markers. In Japanese, for instance, a SOV sentence such as (18) has apparent postpositional Case markers, so that the preverbal NPs are licensed:

- (18) John ga Mary o but-ta (Kuno 1973:3)  
 nominative accusative hit-past  
 particle particle  
 'John hit Mary'

Because the preverbal NPs John and Mary are Case-marked by the postpositions ga and o, (18) is a well-formed sentence. Likewise, a SOV sentence in Korean also has such Case markers:

- (19) John i Mary l1l sala hanta (Park 1973:69)  
 subject object love suffixes  
 marker marker  
 'John loves Mary'

We can see the postpositions i and lil in Korean play the same roles as ga and o in Japanese.

In Chinese there are two particles dou and ye which, I claim, have a similar function as the Case markers in Japanese and Korean, because they can Case-mark the pre-O's in Chinese as shown in (8) and (9) above.

Dou and ye are customarily assumed to be adverbs before the verb, nevertheless, I argue that we should differentiate them in two different situations. In normal cases, dou 'all' and ye 'also' are adverbs, but when they appear after a pre-O, dou and ye appear to have lost their properties of adverb, and function as Case markers of the pre-O. I will show that an adverb dou and a Case marker dou differ from each other in at least three aspects.

A. An adverb dou may be optional in a sentence, while the Case marker (CM) dou is obligatory, as shown in the following contrasts:

- (20) a. Wo zhe shi dou zhidao-le  
I this thing all know ASP  
'I have known all about this thing'
- b. Wo zhe shi zhidao-le  
I this thing know ASP  
'I have known about this thing'

- (21) a. Wo zhe shi dou zhidao  
 I this thing CM know  
 'I even know about **this thing**' (It is unusual to know such a thing.)
- b. \*Wo zhe shi zhidao  
 I this thing know  
 ('I have known about **this thing**')

The pre-O's in (20) are licensed by Perfective and the adverb dou is optional; but in (21a) dou is the Case marker that licenses the pre-O, so it is obligatory.

B. The structural positions of the two dous are different, e.i., for an adverb, the structure is <sub>vp</sub>[pre-O [dou V]], while for a Case marker, it is <sub>vp</sub>[[pre-O dou] V]. Consider the evidence:

- (22) a. Wo zhe shi (PAUSE) dou (\*PAUSE) zhidao-le  
 I this thing all know ASP  
 'I have known all about **this thing**'
- b. Wo zhe shi (\*PAUSE) dou (PAUSE) zhidao  
 I this thing CM know  
 'I even know about **this thing**' (The case is unusual.)
- (23) a. Wo zhe shi yijing dou zhidao-le  
 I this thing already all know ASP  
 'I have already known all about **this thing**'
- b. \*Wo zhe shi yijing dou zhidao  
 I this thing already CM know  
 ('I even know about **this thing** already')

For the adverb dou in (22a) and (23a), the phonetic pause or another adverb can occur between the pre-O and [dou V], but cannot occur in such a position in (22b) and (23b) where dou is a Case marker. The adverb dou therefore forms a constituent with elements on its right, while the Case marker dou forms a constituent with elements on its left, in this case the pre-O.

C. As has already been seen in (20a) and (21a) above, the interpretations of the sentences with a different dou are quite



different. In (20a) the adverb dou is used as its normal meaning 'all', while dou in (21a), as well as ye, just gives an abstract meaning something like an implication that the situation described is very unusual.

In summary, similar to the Case markers in Japanese or in Korean, dou and ye can license pre-O's in Chinese on one hand; on the other hand, different from the usual Case markers, dou and ye have the abstract meaning of unusualness since they originate from adverbs in Chinese.

Like English, every wh-element in Chinese has two syntactic functions. To form an interrogative question is their normal usage, but another is their non-interrogative function. In English the non-interrogative wh-elements usually make embedded nominal clauses as follows:

(24) Show me what you have written

(25) Who you marry is up to you

(26) Why he did so is very clear

Wh-elements in Chinese can be interpreted in three ways: (A) as interrogative pronouns or quantifiers, which is the most common usage, (B) as indeterminate pronouns or quantifiers, and (C) as pronouns or quantifiers with universal meaning, exemplified as in (27-29) respectively:

(27) Zhangsan qu-guo nali?<sup>3</sup>  
Z. go ASP where  
'Where has Zhangsan been to?'

(28) Zhangsan mei qu-guo nali  
Z. not go ASP where  
'Zhangsan has not been to somewhere'

- (29) Zhangsan nali dou qu-guo  
 Z. where CM go ASP  
 'Zhangsan has been to **everywhere**'

Among the three usages<sup>6</sup> we can see the wh-element with a universal meaning can be a pre-O and obtain Case from the verb with a Case marker dou or ye so as to be licensed as in (29) above. More examples are show in below:

- (30) Ta shenme dou zhidao  
 he what CM know  
 'He knows **everything**'
- (31) Wo shui ye bu xiangxin  
 I who CM not believe  
 'I don't believe in **anyone**'

In the sentences (29-31), the implication is that the situations described in the sentences are very unusual.

Not only wh-elements, but also other NPs with a universal meaning, serve as pre-O's with the help of a dou or ye, i.e., some quantifiers such as mei 'every', suoyou 'all', yigie 'complete', yige 'single', etc.. For example:

- (32) Wo mei-ge dianshi jiemu dou kan  
 I everyCL T.V. program CM watch  
 'I watch **every** T.V. programm'
- (33) Ta ban-li suoyou de xuesheng dou renshi  
 he class-in all of student CM know  
 'He knows **every** pupil of the class'
- (34) Lisi yige zi ye bu renshi  
 L. oneCL word CM not know  
 'Lisi even does not know a **single** character'

The pre-O may be a definite NP without a quantifier, but the unusual meaning is obvious:

- (35) Zhangsan Shashibiya dou bu zhidao  
 Z. Shakespeare CM not know  
 'Zhangsan even does not know **Shakespeare**'

- (36) a. Ni zhe-ben shu ye song Li liaoshou ma?  
 you this CL book CM give Li professor QM  
 'Will you give Prof. Li even **this** book?'  
 b. Ni Li liaoshou ye song zhe-ben shu ma?  
 you Li professor CM give this CL book QM  
 'Will you give this book even to **Prof. Li**?'  
 \*

Crucial evidence for the assumption that dou and ye are licensors and Case-markers of the pre-O is the fact that all the instances of dou and ye are obligatory in above sentences, and cannot appear in their SVO counterparts.<sup>1</sup> For instance:

- (37) a. \*Zhangsan nali qu-guo (cf. (29))  
 Z. where go ASP  
 ('Zhangsan has been to everywhere')  
 b. \*Zhangsan dou qu-guo nali (cf. (29))  
 Z. CM go ASP where  
 ('Zhangsan has been to everywhere')  
 (38) a. \*Wo mei-ge dianshi jiemu kan (cf. (32))  
 I every CL T.V. program watch  
 ('I watch every T.V. program')  
 b. \*Wo dou kan mei-ge dianshi jiemu (cf. (32))  
 I CM watch every CL T.V. program  
 ('I watch every T.V. program')  
 (39) a. \*Zhangsan Shashibiya bu zhidao (cf. (35))  
 Z. Shakespeare not know  
 ('Zhangsan even does not know Shakespeare')  
 b. Zhangsan ye bu zhidao Shashibiya (cf. (35))  
 Z. either not know Shakespeare  
 \* CM  
 'Zhangsan does not know Shakespeare, either'  
 ('Zhangsan even does not know Shakespeare')  
 \*

The (a) sentences are ill-formed because the pre-O's lack the Case marker dou or ye, and the (b) sentences are unacceptable because the postverbal objects need no overt Case marker.

The Case marker dou or ye is compatible with the Perfective mentioned above. Sometimes they may co-occur in sentences:

- (40) Zhangsan Shashibiya dou bu zhidaole  
 Z. Shakespeare CM not know ASP  
 'Zhangsan has even forgot Shakespeare'
- (41) Ni nei-ben shu ye song Li jiaoshou le ma?  
 you that CL book CM give Li professor ASP QM  
 'Have you given Prof. Li even that book?'
- (42) Wo xianzai zugui ye bu ti le  
 I now football CM not play ASP  
 'I even stop playing football now'

As long as one (either the Case marker or Perfective) is present, the other (Perfective or Case marker respectively) is optional.

### 3.2.3 Ba Construction and Lian

Ba with its complement is a well-known grammatical construction that is described as having the function to front object to the position between the subject and the verb. The following are several brief descriptions of ba construction from some works.

Li & Thompson (1974a:203) describe ba as follows:

- (43) a. In Modern Mandarin Chinese, ba has become a particle functioning as an objective case marker.
- b. Zhangsan ba Lisi piping le (L. & T. 1974a:203)  
 Z. BA L. criticize ASP  
 'Zhangsan criticized Lisi'

Huang (1982:26-7):

- (44) a. A fairly common variant of the word order of a transitive sentence has the object of the verb occurring in the form of a preverbal PP headed by the preposition ba.
- b. Ta ba Lisi pian le (Huang 1982:27)  
 he BA L. cheat ASP  
 'He cheated Lisi'

Koopman (1984:124):

- (45) In the ba-construction, a thematic object may occur in preverbal position, provided it is marked by the preposition ba.

Cheng & Ritter (1987:70) formulize a ba-linking filter:

- (46) a.
- |                                |                                                 |
|--------------------------------|-------------------------------------------------|
| Ba                             | Verb                                            |
| <affected theme <sub>i</sub> > | <X <sub>j</sub> <affected theme <sub>i</sub> >> |
| *unless i=k                    |                                                 |

It states that a structure containing ba will be ungrammatical unless the affected theme argument of ba is co-indexed with the affected theme argument of the verb.

- b. Wo ba Lisi da-shang-le (Cheng & Ritter 1987:70)  
I BA L. hit-wounded ASP  
'I hit Lisi and he is wounded'

Li (1990:192-3):

- (47) a. Though ba may raise the postverbal NP complement to the VP-internal preverbal positions, this process obviously does not apply to all transitive verbs.
- b. Baoyu ba Daiyu xia-wang            le yao shuo de hua  
B.    BA D. frighten-forget ASP want say POS speech  
'Baoyu frightened Daiyu (so much that Daiyu) forgot what she wanted to say' (Li 1990:193)

ba-construction in (48b) is ungrammatical because as a sentence in present Tense, its Perfective Aspect must be indicated by a marker:

- (48) a. Da yu chi xiao yu  
big fish eat small fish  
'Big fish eats small one'
- b. \*Da yu ba xiao yu chi  
big fish BA small fish eat  
'The big fish has eaten the small one'
- c. Da yu ba xiao yu chi le  
big fish BA small fish eat ASP  
'The big fish has eaten the small one'

Only when a Perfective morpheme attaches the verb can the sentence be acceptable as in (48c).

In all the cited examples in (43b, 44b, 46b and 47b) we can also find a Perfective morpheme le right after the verbs, and all the instances of le in these sentences are obligatory, otherwise, none of the sentences is well-formed.

So we argue that it is not only ba itself that licenses those pre-O's, but also the Perfective Aspect.

The ba-construction in future Tense may occur without a Perfective morpheme:

- (49) a. Wo yao ba diren sha-si  
I want BA enemy kill-die  
'I will have killed the enemy'
- b. Wo yao ba diren sha-le  
I want BA enemy kill ASP  
'I will have killed the enemy'
- c. \*Wo yao ba diren sha  
I want BA enemy kill  
'I will have killed the enemy'

The viewpoint of Li that compounds allow ba to front an object is correct in this case. That is because si 'die' in the compound

verb sha-si 'kill' contains a zero Perfective in the future sentence (49a). Such a si in (49a) can be replaced by a Perfective le as in (49b). If there is neither si nor le, as in (49c), the sentence is ungrammatical. Therefore, in discussing the syntactic function of ba construction in Chinese, Perfective Aspect cannot be ignored.

In Chinese there is another particle lian which often occurs right before a pre-O together with a postpositional Case marker dou or ye. Lian differs from ba in three aspects. (A). Ba is a functional particle with no semantic value while lian has a strong meaning something like 'even' in English. (B). In a ba construction ba is obligatory while Lian is optional in any case. (C). Ba can only appear before pre-O while lian can also occur in front of a subject or a topic. For instance:

- (50)     Zhe ren (lian) laji     ye     yao  
           this person even garbage    CM   want  
           'This person even wants **garbage**'
- (51)     Ta zai jia-li (lian) yige wan dou bu xi  
           he at home-in    even   a CL bowl CM   not wash  
           'He does not wash even **a single dish** at home'

Since lian is optional in these sentences, the crucial licensors in (50) and (51) are ye and dou. Therefore, lian is an adverb instead of a Case marker like ba.

### 3.2.4 Sentential Reciprocity

So far we have seen that SVO structure in Chinese is unmarked while SOV structure is marked by the elements such as dou, ye, guo, le, ba, etc.. These elements serve to license pre-O's

syntactically. In addition, they confer to the pre-O's some focus meaning (universal or unusualness) as described above.

Some pre-O's, however, may stand without any markers of the type I have just discussed, if they occur in two or more coordinate SOV structures in Chinese. This is what I will discuss in this section, namely, sentential reciprocity.

Johns (p. c.) notes that there seems to be a special effect in listing items. Data from Chinese prove that listing items can release, even eliminate, many grammatical restrictions.<sup>8</sup> In other words, an ungrammatical pre-O in a SOV sentence may become acceptable if it is matched with another pre-O in a coordinate sentence, as shown in the following:

- (52) a. Wo qi zixingche  
I ride bicycle  
'I ride a bicycle'
- b. \*Wo zixingche qi  
I bicycle ride  
('I ride a bicycle')
- c. Wo<sub>i</sub> zixingche<sub>i</sub> qi t<sub>i</sub>, e<sub>i</sub> che<sub>i</sub> ye kai t<sub>i</sub><sup>9</sup>  
I bicycle ride car also drive  
'I ride a **bicycle**, also **drive**'
- (53) a. Zhangsan chi huangyou  
Z. eat butter  
'Zhangsan eats butter'
- b. \*Zhangsan huangyou chi  
Z. butter eat  
('Zhangsan eats butter')
- c. Zhangsan<sub>i</sub> huangyou<sub>i</sub> chi t<sub>i</sub>, e<sub>i</sub> niunai<sub>i</sub> que bu chi t<sub>i</sub>  
Z. butter eat milk but not eat  
'Zhangsan eats **butter**, but does not eat **milk**'

For the single sentence such as (52b) or (53b), what makes it



ungrammatical is that the pre-O must not go before the main verb without a licenser. But in (52c) and (53c), the pre-O's are acceptable due to the sentential reciprocity. It is very interesting that in the well-formed (52c) and (53c), the phonetic and semantic focus also fall on the pre-O's which are ungrammatical in the single clause examples. Sentential reciprocity is another type of marked form for pre-O's. Therefore, if the discourse situation contains a listing, almost all objects may be fronted to the medial position between the subject and the verb in Chinese, making it appear as if the grammatical restriction had been eliminated.

### 3.3 Some Precedence Relations in Theta Role Assignment

#### 3.3.1 A Semantic Restriction for Object Movement

I have mentioned above that it is easier to move an object to the initial position than the medial position of the sentence in Chinese. So an object may be either a pre-O or a pre-T1 as in (54a) and (54b) below:

- (54) a. Wo zhe-pian wenzhang yijing du le  
 I this CL article already read ASP  
 'I have already read this article'
- b. Zhe-pian wenzhang wo yijing du le  
 this CL article I already read ASP  
 'I have already read this article'

It is important to note that, in many transitive sentences, the same NPs can appear in either subject or object position due to selectional restrictions, as shown in below:

- (55) a. Zhangsan yijing **tongzhi** Lisi le  
 Z. already notify L. ASP  
 'Zhangsan has notified Lisi'
- ↓ [Agent, Patient] ↓
- b. Lisi yijing **tongzhi** Zhangsan le  
 Z. already notify Z. ASP  
 'Lisi has notified Zhangsan'
- ↓ [Agent, Patient] ↓

According to our Perfective licensing condition, both (55a) and (55b) are allowed to move their object to either the initial position or the medial position. As a result, we get an uninterpretable sentence, as in (56) below, where we are unable to figure out whether it is derived from (55a) by pre-O movement or from (55b) by pre-Tl topicalization:

- ?       ?       ← [Agent, Patient]
- (56) \*Zhangsan Lisi yijing **tongzhi** le  
 Z. L. already notify ASP  
 (One of the two has already notified the other one)

If (56) is derived from (55a) by pre-O movement, Zhangsan will be the Agent and Lisi the Patient of the verb **tongzhi** 'notify'. But it is equally possible that (56) is derived from (55b) by topicalization. In this event, Zhangsan will be the Patient and Lisi the Agent of the verb. Sentences such as (55a) and (55b), therefore, can never undergo either pre-O movement or topicalization.

Only those sentences where the NPs in subject and object positions are not substitutable, due to the selectional restrictions, can undergo the object movement. For example, only (57a), but not (57b) is the possible source of the sentences in (54) which demonstrate both movements.

- (57) a. Wo yijing du le zhe-pian wenzhang  
 I already read ASP this CL article  
 'I have already read this article'
- b. \*Zhe-pian wenzhang yijing du le wo  
 this CL article already read ASP I  
 (No sense)

In other words, (57a) can be altered either by pre-O movement, as in (54a), or by topicalization as in (54b). The sentence such as (57b) does not exist since the inanimate 'article' cannot 'read' the animate object 'I'.

Thus I assume a preliminary generalization regarding this ambiguity as formulated below:

- (58) Y is NOT allowed to move  $\alpha$  if  $_{ASP}[X \text{ verb}_i Y]$  can properly be changed as  $_{ASP}[Y \text{ verb}_i X]$

### 3.3.2 A Restriction of Pro-drop

Since Chinese is generally regarded as a pro-drop language (Huang 1982, 1984, Xu 1986, Cheng 1989), every pre-NP may be dropped, given sufficient context.

In terms of the formulation of (58), sentences (59) and (60) below are all well-formed sentences with the same verb chi 'eat':

- (59) a. Zhangsan ji bu chi t<sub>i</sub> le  
 Z. chicken not eat ASP  
 'Zhangsan does not want to eat **chicken** anymore'
- b. Ji Zhangsan bu chi t<sub>i</sub> le  
 Chicken Z. not chi ASP  
 'Chicken, Zhangsan does not want to eat anymore'
- (60) a. Ji mi bu chi t<sub>i</sub> le  
 chicken rice not eat ASP  
 'The chicken does not want to eat **rice** anymore'

- d. Mi ji bu chi t<sub>i</sub> le  
 rice chicken not eat ASP  
 'Rice, the chicken does not want to eat anymore'

In the event that Zhangsan in (59) and mi 'rice' in (60) are dropped, we will obtain another type of ambiguous sentence as in (61), which has two different possibilities as in (62) below:

- (61) ?Ji bu chi le  
 chicken not eat ASP  
 a. '(Somebody) will not eat chicken anymore' (from (59))  
 b. 'The chicken will not eat any more' (from (60))

- (62) a. <sub>ASP</sub>[[<sub>pro</sub> <sub>NP</sub>[[ji <sub>VP</sub>[bu chi t<sub>i</sub>]]] le]  
 (Z.) chicken not eat ASP  
 b. <sub>CP</sub>[<sub>pro</sub> <sub>ASP</sub>[[ji <sub>VP</sub>[bu chi t<sub>i</sub>]]] le]  
 (rice) chicken not eat ASP

Therefore, in case a sentence <sub>ASP</sub>[X Y<sub>i</sub> verb<sub>i</sub> t<sub>i</sub>] has a counterpart <sub>NP</sub>[Y<sub>i</sub> Z. verb<sub>i</sub> t<sub>i</sub>], X and Z<sub>i</sub> cannot be dropped without a context.

### 3.3.3 A Hierarchy in Theta-role Assignment

As argued above, the theta role assignment, repeated in (63) below, is ambiguous, thus object movement is prohibited. If we replace Lisi (name) by wo 'I', however, as in (64), the theta role assignment turns to be clear:

- ?       ?       ← [Agent, Patient]  
 (63) 'Zhangsan Lisi yijing tongzhi le  
 Z. L. already notify ASP  
 (One of the two guys has already notified the other one)

- ↓       ↓       [Agent, Patient]  
 (64) a. Zhangsan wo yijing tongzhi le  
 Z. I already notify ASP  
 'I have already notified Zhangsan'

- [Agent, Patient]
- b. Wo Zhangsan yijing tongzhi le  
 I Z. already notify ASP  
 'I have already notified Zhangsan'
- [Agent, Patient]
- c. Zhangsan yijing tongzhi wo le  
 Z. already notify I ASP  
 'Zhangsan has already notified me'

In (64a) and (64b), the Agent role has to be assigned to the first person pronoun wo 'I' and the Patient role to the proper noun Zhangsan. In order to express that 'Zhangsan has already notified me', the normal word order must be used as in (64c). Why is (63) ambiguous, while (64a) and (64b) are not?

The evidence of (64) shows that there is a hierarchy in this case, which could be schematized as follows:

- (65) a. Person Pronoun --> Proper Noun  
 b. Agent --> Patient

The schemata mean that on one hand, a person pronoun that is higher on the hierarchy takes precedence in order to receive a higher theta role over a proper noun that is lower; on the other hand, Agent, which is higher than Patient, takes precedence to be assigned. So the Agent is always assigned to wo 'I' and the Patient is assigned to Zhangsan in (64a) and (64b).

It seems to me that all person pronouns belong to the same level on the hierarchy. For instance:

- (66) Zhangsan ta yijing tongzhi le  
 Z. he already notify ASP  
 'Zhangsan, he has notified already'  
 \*'Zhangsan has already notified him'

- (67) a. \*Wo ta yijing tongzhi le  
           I he already notify ASP  
           (nonsensical)
- b. \*Ta wo yijing tongzhi le  
           he I already notify ASP  
           (nonsensical)

In (66), it is the third person pronoun, like the first person pronoun in (64a), that is assigned Agent; while the ungrammaticality of the examples in (67) show that first and second person pronouns are on the same level.

If this hierarchy is true, the formulation of (58) should be revised as (68):

- (68)     Y is NCT allowed to move  $\alpha$  if  $_{ASP}[X \text{ verb}_i Y]$  can properly be changed as  $_{ASP}[Y \text{ verb}_i X]$ , and Y is not lower than X on the hierarchy of theta-role assignment.

This notion of hierarchy needs more research to do. Here I can claim only that a hierarchy can account for the non-ambiguity of sentences such as (66). I have also shown that object movement is not only a syntactic movement, but also involves an important semantic restriction.

## Footnotes to Chapter 3:

- <sup>1</sup> See footnote 5 of Chapter 2.
- <sup>2</sup> The word(s) bold-faced in the English translations in this thesis should be stressed both phonologically and semantically.
- <sup>3</sup> Interrogative pronouns in Chinese parallel *wh*-elements in English, so I call them *wh*-elements for short.
- <sup>4</sup> Most Aspects in Cheng (1989) are Perfectives with a *le*.
- <sup>5</sup> In a Chinese interrogative sentence, the position of a *wh*-element is exactly the same as that in a declarative sentence.
- <sup>6</sup> The usage of *wh*-elements is a very interesting topic in Chinese, but it is beyond the scope of this thesis (See Huang (1982), Li (1991a, 1991b) among others). I will only discuss what is relevant to pre-NPs.
- Dou* and *ye* can occur in a normal SVO sentence when they serve as adverbs, which are quite different from the Case markers, as I have argued earlier. See the example in (39b).
- <sup>8</sup> This effect extends many aspects in Chinese syntax. For instance, there are many restrictions for a nominal predicate in Chinese, but with the sentential reciprocity, it seems that the restrictions are relaxed, as shown below:
- (i) a. \*Zhangsan laoshi  
Z. teacher  
'Zhangsan is a teacher'
- b. \*Wo putaojiu  
I wine  
'I'd like wine'
- (ii) a. Zhangsan laoshi, Lisi lushi, Wangwu gongchengshi  
Z. teacher L. lawyer W. engineer  
'Zhangsan is a teacher, and Lisi is a lawyer, and Wangwu is an engineer'
- b. Ta pijiu, wo putaojiu  
he beer I wine  
'He wants beer and I'd like wine'
- <sup>9</sup> *Ye* in this sentence is just an adverb. One cannot say:
- (i) \*Wo *che* ye kai  
I car also drive  
'I also drive a car'

## Chapter Four

### Topicalization (Pre-T1)

#### 4.1 Introduction

As far as I can determine, there is not a unanimous definition for the term "topic" in linguistics. It is given different interpretations by different approaches.

Topic is often regarded as a functional element within a pragmatic approach. For instance, the functional linguist Dik (1989:266-267) describes topic as follows:

- (1) A discourse, taken in the wide sense of any kind of coherent text (a story, a monologue, a dialogue, a lecture, etc.), is about certain entities.... For those entities about which a certain discourse imparts information we may use the term Discourse Topic.

In terms of his statement, a topic may appear in any position of a sentence:

- (2) a. The man was in the house (Dik 1989:269)
- b. John gave a party last week, but the music was awful (Dik 1989:267)
- c. I'm going to tell you a story about an elephant called Jumbo (Dik 1989:268)

Apparently, these pragmatic topics do not have anything in common syntactically, but they are just pieces of speech with the focus or stress of the discourse. It is quite different from the meaning of topic when it is first borrowed into linguistics by Nida



(1964:66) who says:

- (3) It has been found that all languages seem to have something equivalent to subject-predicate constructions. These may in some instances be more aptly termed topic-comment.

Following Nida, Chao (1968) proposes that in Chinese the grammatical meaning of subject and predicate in a sentence is topic and comment, i.e., topic is subject. The following examples are given by Chao (1968:86):

- (4) Weile zhe shiqing wo zheng fachou  
for this thing I really worry  
'On account of this I am really worried'
- (5) Zai yi nian-li wo zhi bing-le yici  
at one year-in I only sick AM once  
'In one year I was sick only once'

The underlined PPs are subjects of (4) and (5), because they are topics. That Chao equates topic with subject means he regards topic as a syntactic constituent which always appears in the beginning of a sentence. Li & Thompson (1976) distinguish between topic and subject and view topic as an important element of a sentence, like subject or object. However, they do not give a definition of topic. In Li & Thompson (1975), they call both the sentences in (6) "topicalized" sentences:

- (6) a. Shu, haizi mai le (L & T 1975:168)  
book child buy ASP  
'The book, the child has bought it'
- b. Haizi, shu mai le (L & T 1975:168)  
child book buy ASP  
'The child has bought the book'

So 'book' in both sentences is a topic. This is not in accordance with one of Li & Thompson's criteria for topic (1976:465) that "the surface coding of the topic always involves the sentence-initial

- (9) a. Zhangsan, wo yijing tongzhi-le  
 Z. I already notify ASP  
 'Zhangsan, I have notified already'
- b. Wo Zhangsan yijing tongzhi-le  
 I Z. already notify ASP  
 'I have already notified Zhangsan'

Suppose the notification is a meeting announcement, the presupposition of (9a) is that Zhangsan should attend the meeting because 'I have given the notification to him'; while the sentence of (9b) presupposes that Zhangsan is the person that 'I take the responsibility for having notified'. (As for other people, I wonder if they have been notified, which is not my responsibility.) We can see that the stress falls on the relation between the pre-T1 and the comment clause which is saying something about the pre-T1 in (9a), while the stress falls on the relation between the verb and the pre-O, which is still an object of the verb.

This is the reason why all pre-O's, except for ba-construction, can be changed to pre-T1, but not vice versa. I will discuss this property of pre-T1 in 4.3.3.

## 4.2 The Structure of Topicalization

### 4.2.1 Topic in Generative Grammar

Chomsky (1977) argues that topicalization should be accounted for by wh-movement, because topicalization patterns with wh-movement in a number of respects. Chomsky distinguishes topics in front of sentences between topicalization and left-dislocation, as shown below:

position" (see 1.2.2). The 'book' in (6b) is what I call pre-0 in the last chapter.

In most cases an object that can be a pre-O can also be a pre-T1, as in (6) above, so there is a similarity between them. Both the pre-T1 and the pre-O are moved from the underlying object position, thus they are assigned the same theta role by the verb at D-structure, as in (7) and (8) below:

- (7) a. child buy ASP book  
haizi mai-le shu  
                    topicalization  
b. shu, haizi mai-le t,  
book child buy ASP  
'The book, the child has bought it'
- (8) a. child buy ASP book  
haizi mai-le shu  
                    pre-O movement  
b. haizi shu, mai-le t,  
child book buy ASP  
'The child has bought the book'

- (8) a.  $\begin{array}{ccccccc} & & \downarrow & & \text{[Agent, Theme]} & & \downarrow \\ \text{child} & \text{buy} & \text{ASP} & & \text{book} \\ \text{haizi} & & \text{mai-le} & & \underline{\text{shu}} \\ & & & & \downarrow \\ & & & & \text{pre-O movement} \end{array}$
- b.  $\text{haizi } \underline{\text{shu}} \text{ mai-le } t_i$
- child book buy ASP  
'The child has bought the book'

The crucial difference between a pre-T1 and pre-O is that there is a predication relationship between the pre-T1, not the pre-O, and the comment clause with a trace coindexed with the pre-T1. In addition, both movements make a focus presupposition (see Dik 1989 Chapter 13) for the original object due to the marked word order. The presuppositions of a pre-T1 and a pre-O are different. Observe the following contrast:

(10) This book, I asked Bill to get his students to read  
(Chomsky 1977:91)

(11) As for this book, I think you should read it  
(Chomsky 1977:91)

Since there is a gap in (10), the sentence-initial pre-NP involves a movement. There seems to be no gap in (11) for 'this book', there it does not involve movement. The former is topicalization and the latter is left-dislocation. Therefore, based on Bresnan's R2 (1975), Chomsky postulates a base rule R1:

(12) R1: S"  $\rightarrow$  TOP S' (Chomsky 1977:91)

R2: S'  $\rightarrow$  COMP S

Thus the topicalized (10) has the structure as in (13):

(13) [<sub>S'</sub> [<sub>S</sub> this book] [<sub>S'</sub> [<sub>COMP</sub> what] [I asked Bill to get his  
students to t]]] (Chomsky 1977:91)

From Chomsky's R1 [S"  $\rightarrow$  TOP S'] we can see that there is a wh-movement within the S-bar as shown in (13) above, i.e., a null wh-element that ends up in COMP and leaves behind a trace.

Some linguists do not quite agree with what Chomsky suggests. Baltin (1982) points out that in the light of Chomsky's analysis, the generalization of both topicalization and left-dislocation is possible in the matrix sentence; but in an embedded sentence, only topicalization is possible, not left-dislocation.

R2 in (12) allows S" to be generated in an embedded sentence, thus the embedded topicalization structures are available. Lasnik and Uriagereka (1988) claim that that cannot be correct, because if it is true, sentences such as in (14) below cannot be ruled out. If S" cannot be generated in an embedded sentence, then,

topicalization structures should also be ill-formed in embedded sentences:

- (14) a. \*He is a man to whom liberty, we would never grant it.  
(L. & U. 1988:155)
- b. \*That LSIT you should read it, is obvious  
(L. & U. 1988:155)

Thus, Lasnik & Uriagereka (1988:155) argue that the following analysis remains available:

- (15) Apparently we need some mechanism for generating topicalized sentences that is independent of the existence of a base-generated Top configuration. Of course, such an analysis is available: the old traditional analysis, that all we are doing is moving an NP to the front of the sentence. We might, then, say that Topicalization involves (or can involve) the adjunction of an NP to S.

Emonds (1976:31) claims that sentences such as (10):

- (16) result from a transformation, called TOPICALIZATION, that moves noun phrase to the front of the sentence, that is, it attaches them to the highest S.

Based on these approaches, an NP is moved in front of a preposed auxiliary by topicalization, assuming the position of SPEC of CP, while left-dislocation is adjoined to CP with no movement.

#### 4.2.2 The Empty Category in Chinese Topicalized Sentences

It seems to be a question whether the empty category is a trace of pre-T1, or a pro of resumptive element in a Chinese topicalized sentences.

The resumptive element in sentences is a special constituent in Chinese. In order to emphasize some topicalized NPs or describe them more clearly, sometimes one can fill a coindexed resumptive pronoun or deictic NP in the gap, as shown below:

- (17) Zhangsan<sub>i</sub> wo renshi e;  
 Z. I know  
 'Zhangsan, I know (him)'
- (18) a. Zhangsan<sub>i</sub> wo renshi ta.  
 Z. I know he  
 'Zhangsan, I know him'
- b. Zhangsan<sub>i</sub> wo renshi zhe-ge ren.  
 Z. I know this CL person  
 'Zhangsan, I know this person'

In (17) there is an empty category, which is filled with resumptive elements 'he' and 'this person' in (18a) and (18b) respectively.

However, facts show that most topicalized sentences do not contain any resumptive element, such as (17). In some topicalized sentences, for example, when the topic is generic, no resumptive element can fill the empty position, as in the following:

- (19) a. Shuiguo<sub>i</sub> Zhangsan bu xihuan chi e;  
 fruit Z. not like eat  
 'Fruit, Zhangsan does not like to eat'
- b. \*Shuiguo<sub>i</sub> Zhangsan bu xihuan chi ta.  
 fruit Z. not like eat it  
 ('Fruit, Zhangsan does not like to eat it')
- (20) a. Yi-ge zi<sub>i</sub> Lisi dou bu renshi e;  
 oneCL word L. all not recognize  
 'Lisi cannot recognize a single word'
- b. \*Yi-de zi<sub>i</sub> Lisi dou bu renshi ta.  
 oneCL word L. all not recognize it  
 ('Lisi cannot recognize a single word')
- (21) a. Shenme difang<sub>i</sub> ta dou qu-guo e;  
 what place he all go ASP  
 'He has been to everywhere'

- b. \*Shenme difang, ta dou qu-guo nali.  
 what place he all go ASP there  
 ('He has been to everywhere')

The empty positions in the (a) sentences cannot be filled with other elements. On this basis, I claim that a topicalized sentence without a resumptive element is the unmarked form, and one with a resumptive element is the marked form, due to its being used so infrequently. I argue that the empty category is a covert trace involving movement, while the resumptive element is an overt trace that is a type of anaphor in a Chinese topicalized sentence.

Evidence supporting this claim is the fact that, on its own, in that position, the resumptive element requires an antecedent that is either the topic, or something in the preceding context. This is quite different from the topicalized NP which is always independent. Compare the following sentences:

- (22) Zhe-ben shu, wo hen xihuan ta.  
 this CL book I very like it  
 'This book, I like it very much'
- (23) a. Zhe-ben shu, wo hen xihuan t.  
 this CL book I very like  
 'I like this book very much'
- b. ?Wo hen xihuan ta.  
 I very like he/she/it  
 ('I like somebody or something very much')

Clearly, both (22) and (23a) are sentences with a full interpretation. In contrast, only when we have the information about what ta 'he/she/it' refers to in (23b) can the sentence be acceptable. In other words, ta is a dependent anaphor of the antecedent 'this book' in (22). An anaphor is not required in the

sentence, so (23a) is well-formed; but an antecedent must be established first in the preceding discourse, otherwise, the anaphor will not be fully interpretable, as in (23b).<sup>1</sup>

Likewise, a deictic NP in the trace position such as 'this person' in (18b) above plays the same role as ta in (18a) and (22). In that position, the resumptive deictic NP is different from other NPs. Observe the contrast:

- (24) a. Zhangsan wo renshi zhe-ge ren.  
           Z.           I know this CL person  
           'Zhangsan, I know this person'
- b. \*Zhangsan wo renshi yi-ge ren.  
           Z.           I know a CL person  
           ('Zhangsan, I know this person')
- (25) a. ?Wo renshi zhe-ge ren  
           I know this CL person  
           ?'I know this person'
- b. Wo renshi yi-ge ren  
           I know a CL person  
           'I know a person'

The sentences in (24) show that only the deictic NP 'this person' can be the anaphor of Zhangsan as in (24a), but not a non-deictic NP 'a person' as in (24b). Nevertheless, the situation is opposite in (25). (25a) is not fully interpretable unless we know the antecedent of 'this person' somewhere in the preceding context, while (25b) is fully interpretable because it is not necessary for the audience to know 'who I know'.

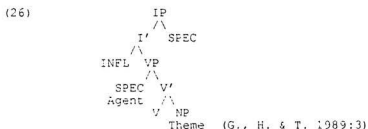
Due to the above reasons, I would say that the empty position in sentences such as (17) above should be treated as a trace left by the object which moves to topic position.



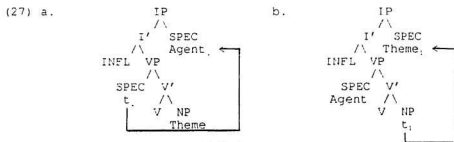
## 4.2.3 Topicalized Structure in Chinese

Base on what has been examined above, we can discuss the structure of topicalization in Chinese in this section.

Guilfoyle, Hung & Travis (1989) distinguish between two positions in Malayo-Polynesian languages, i.e., theta sensitive position that is the SPEC of VP and a structural position that is the SPEC of IP, as in below:



Both the SPEC of VP and the NPs in the object position are theta-marked. If either of them is not assigned Case within VP, it is forced to move to the SPEC of IP as a topic where it is assigned Case via SPEC-head agreement with INFL, as shown in (27):



If both the Agent and the Theme are licensed within the VP, a third NP can appear in the SPEC of IP:

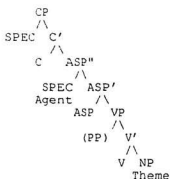
(28)



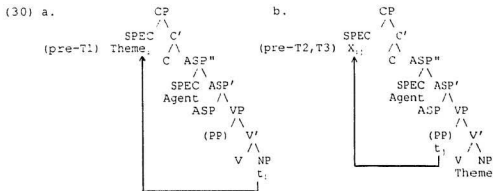
(cf. G., H. &amp; T. 1989:6)

Even though the Malayo-Polynesian languages are different from Chinese,<sup>2</sup> there are still some similarities between the two kinds of languages. Following Emonds (1976), Lasnik & Uriagereka (1988), and Guilfoyle, Hung & Travis (1989), I argue that there are also theta-sensitive positions and structure-sensitive positions in Chinese, as shown below:

(29)



The SPEC of ASP'' (subject position) and the object position of V are theta marked within ASP''. Under certain conditions, the NP in the object position can be topicalized to the SPEC of CP, which is a non-theta position, as shown in (30a) below. Similar to the Malayo-Polynesian languages, sometimes a PP or another NP (PP with the preposition deleted or a possessor NP, details in Chapter 5) may appear in the SPEC of CP, as in (30b):



$X_i$  in the SPEC of CP in (30b) indicates some topics which are base-generated,<sup>1</sup> that is, those topics are left-dislocation.

#### 4.3 The Licensing Conditions of Topicalization

Since a pre-T1 may be base-generated in the same position (object position) as a pre-O, most licensing conditions of pre-O are applicable to pre-T1.<sup>1</sup>

##### 4.3.1 Pre-T1 and Perfective Aspect

Marked by le or guo, Perfective Aspect can also be the licenser of pre-T1. All pre-Os licensed by perfective Aspect can be changed into pre-T1s:

- (31) a. Xuesheng-men gongke zuo-le  
 student PL exercise do ASP  
 'The students have done the **exercises**'

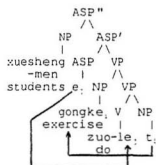
- b. Gongke xuesheng-men zuo-le  
 exercise student PL do ASP  
 'The exercises, the students have done'

- (32) a. Xuesheng-men zuo gongke  
 student PL do exercise  
 'The students do the exercises'

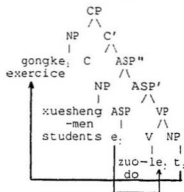
- b. \*Gongke xuesheng-men zuo  
 exercise student PL already do  
 ('Students have already done their exercises')

The pre-O 'exercises' in (31a) becomes a pre-T1 in (31b). In the unmarked normal word order with no Perfective, the sentence in (32a) is well-formed, but it is ill-formed when the object is topicalized, because of the lack of Perfective. The structures of (31a) and (31b) are shown as follows:

(33) a.



b.



Similarly, guo and mei 'have not' can license the pre-T1s, as exemplified in (34-37) below:

- (34) a. Zhangsan qu Meiguó  
 Z. go America  
 'Zhangsan goes to America'

- b. \*Meiguo Zhangsan qu  
 America Z. go  
 ('Zhangsan goes to America')
- (35) Meiguo Zhangsan qu-guo  
 America Z. go ASP  
 'America, Zhangsan has been to (there)'
- (36) a. Lisi bu kan zhe-ben shu  
 L. not read this CL book  
 'Lisi does not read this book'
- b. \*?Zhe-ben shu Lisi bu kan  
 this CL book L. not read  
 ('Lisi does not read this book')
- (37) Zhe-ben shu Lisi mei kan  
 this CL book L. not read  
 'This book, Lisi has not read'

In normal word order, (34a) and (36a) are grammatical with no guo or mei, but neither of them can undergo topicalization, as in (34b) and (36b). When a guo or mei occurs in the sentences, the topicalizations are acceptable, as in (35) and (37).

#### 4.3.2 Dou and Ye in Topicalized Structure

I have claimed that, dou and ye, indicating exceptional meaning, can be Case-markers of pre-O's, which may be non-interrogative wh-elements with universal meaning, some quantifiers with universal meaning or some definite nouns. Such a property is also available to pre-T1.

With the Case-marker dou or ye, non-interrogative wh-elements can be fronted to be pre-T1 like pre-O. Observe the following sentences:

- (38) a. Ta zhidao Shenme?  
 he know what  
 'What does he know?'

- b. \*Shenme ta zhidao  
what he know  
(‘What does he know?’)
- (39) Shenme ta dou zhidao  
what he CM know  
‘Everything, he knows’
- (40) a. Wo xiangxin shui?  
I believe who  
‘Who do I believe in?’
- b. \*Shui wo xiangxin  
who I believe  
(‘Who do I believe in?’)
- (41) Shui wo ye xiangxin  
who I CM believe  
‘Anybody, I believe in’
- (42) a. Zhangsan xiang qu nali?  
Z. want go where  
‘Where does Zhangsan want to go?’
- b. \*Nali Zhangsan xiang qu  
where Z. want go  
(‘Where does Zhangsan want to go?’)
- (43) Nali Zhangsan dou xiang qu  
where Z. CM want go  
‘Everywhere, Zhangsan wants to go’

The initial wh-elements in (38b), (40b) and (42b) are ungrammatical, while those in (39), (41) and (43) are grammatical. This fact shows that dou or ye is the licenser of the pre-TIs in above sentences. Equivalently, marked by an obligatory dou or ye, an object with a quantifier with universal meaning, such as mei ‘every’, suoyou ‘all’, yigie ‘complete’ or yige ‘single’, etc., can be moved to the front of the sentence as a pre-TI:

- (44) Mei-ge dianshi jie mu wo dou kan  
every CL T.V. program I CM watch  
‘I watch **every** T.V. program’

- (45) Sanli suoyou de xuesheng ta dou renshi  
 class-in all POS student he CM know  
 'He knows **all** pupils in the class'
- (46) Yige zi Lisi ye bu renshi  
 single word L. CM not know  
 'Lisi does not know a **single** word'

As mentioned in Chapter 3, dou and ye are a sort of special Case-marker since they originate from adverbs. As Case-markers of pre-T1, dou and ye show many differences from the normal adverbs; nevertheless, they still retain some properties of adverbs. The movement of pre-T1 is further than that of pre-O. We note that the dou or ye cannot jump over the subject together with the pre-T1, but have to stay in the position between the subject and the verb like adverbs, as in the following:

- (47) a. \*Shenme dou ta zhidao (cf. (39))  
 what CM he know  
 ('Everything, he knows')
- b. \*Shui ye wo xiangxin (cf. (41))  
 who CM I believe  
 ('Anybody, I believe in')
- c. \*Nali dou Zhangsan xiang qu (cf. (43))  
 where CM Z. want go  
 ('Everywhere, Zhangsan wants to go')

However, dou and ye in topicalized sentences are quite different from the normal adverbs (cf. 3.2.2). An adverb is the modifier of verbs. The structure of an adverb in the topicalized sentence is [pre-T1 subj [adv V]], hence there is no syntactic relationship between the pre-T1 and the adverb. As a result, other adverbial elements can be inserted between the pre-T1 and the adverb dou or ye, as shown in (48) below:

- (48) a. Zhe san-pian wenzhang wo dou kan le<sup>6</sup>  
 this threeCL article I all read ASP  
 'These three articles, I have all read'
- b. Zhe san-pian wenzhang [qunian] wo dou kan le  
 this threeCL article last-year I all read ASP  
 'These three articles, I all read last year'
- c. Zhe san-pian wenzhang wo [qunian] dou kan le  
 this threeCL article I last-year all read ASP  
 'These three articles, I all read last year'

The time adverbial 'last year' can be inserted either before the subject or after. When Case-marker dou or ye is a licenser of pre-T1, they have a close syntactic relationship with the pre-T1. Consequently, no other adverbial can be inserted between the pre-T1 and dou or ye, even though they stay in adverb position, as in the following:

- (49) a. Shenme shiqing Zhangsan dou bu zhidao  
 what thing Z. CM not know  
 'Zhangsan knows nothing'
- b. \*Shenme shiqing [qunian] Zhangsan dou bu zhidao  
 what thing last-year Z. CM not know  
 ('Zhangsan knew nothing last year')
- c. \*Shenme shiqing Zhangsan [qunian] dou bu zhidao  
 what thing Z. last-year CM not know  
 ('Zhangsan knew nothing last year')

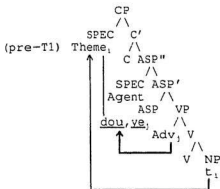
But one can say:

- (50) [Qunian] shenme shiqing Zhangsan dou bu zhidao  
 last-year what thing Z. CM not know  
 'Last year Zhangsan knew nothing'

I suggest in the cases where dou and ye are used as Case-markers, they move up to ASP and produce a licensing relation with the pre-T1, which cannot be separated by any other adverbials, as shown in (51) below:



(51)



#### 4.3.3 Predication Licensing

As noted in 4.1 and shown in 4.3.1 (cf. example (33)), the crucial difference between a pre-T1 and a pre-O is the fact that there is a comment clause following the pre-T1, not the pre-O. In other words, the pre-T1 has a clausal predicate where there is a trace linked with the pre-T1. Thus, a predication relation exists between the pre-T1 and the comment clause.

According to the Principle of Full Interpretation (see Chomsky 1986a:95-101), predication is a kind of licenser if it has a full interpretation. This is the reason why some pre-T1s cannot be pre-O's, since in a topicalized sentence the pre-T1 can also be licensed by predication. The pre-T1s in the following (a) sentences cannot alternate as pre-O's:

(52) a. Chuanghu shui dakai-de t<sub>i</sub>?

window who open ASP<sup>\*</sup>  
'The window, who opened (it)?'

b. \*Shui chuanghu dakai-de?

who window open ASP  
('Who opened the window?')

- (53) a. Zhe-ge wenti wo renwei yinggai taolun t;  
 thisCL question I assume should discuss  
 'This question, I assume to discuss'
- b. \*Wo zhe-ge wenti renwei yinggai taolun  
 I thisCL question assume should discuss  
 ('I assume to discuss this question')

Both the clausal predicates in (52a) and (53a) have full interpretation in (54) and (55) below, even if their object position is empty:

- (54) Shui dakai-de e?  
 who open ASP  
 'Who opened the (door or window)?'
- (55) Wo renwei yinggai taolun e  
 I assume should discuss  
 'I assume to discuss the (question)'

The verbs play an important role in this case. The verb dakai 'open' in (54) implies 'open the door or the window' and the verb taolun 'discuss' implies 'discuss a question'.

Chinese is treated as a pro-drop language by a number of scholars (Huang 1982, 1984, Xu & Langendoen 1985, Cheng 1989), so in certain contexts, topic, subject or object may be dropped. In Chinese, however, some transitive sentences under no circumstances allow their objects to be dropped. It is interesting that the objects in such sentences cannot be moved up, either. For example, the verb shuyu 'belong to' must take an object in the sentence, and the object does not undergo any movement:

- (56) a. Shengli shuyu renmin  
 victory belong-to people  
 'Victory belongs to the people'
- b. \*Shengli shuyu pro  
 victory belong-to  
 (Makes no sense)

- c. \*Renmin shengli shuyu t.  
 people victory belong-to  
 ('Victory belongs to the people')

Because the (56b) does not have a full interpretation, it is not qualified to be the comment clause in (56c).

Li & Thompson (1976) propose that a topic must be definite. There seem to be some generic topics which are not definite. However, I believe that all the topics from topicalization must be definite. The object in (57a) below is indefinite, so it does not undergo topicalization as in (57b):

- (57) a. Ta xie-wan-le yi-ben shu  
 he write-out-ASP a CL book  
 'He wrote out a book'
- b. \*Yi-ben shu ta xie-wan-le  
 a CL book he write-out-ASP  
 ('He wrote out a book')

Therefore, we may give the following formulation as a predication licensing condition for pre-T1:

- (58) A pre-T1 can be licensed by a predication clause if
- the predication clause is still well-formed with the pre-T1 dropped in a certain context,
  - the pre-T1 is definite.

## Footnotes

<sup>1</sup> It seems that the Chinese sentence Wo hen xihuan ta is somewhat different from its English counterpart 'I like him very much'. One does not need an antecedent for 'him' necessarily in English. In fact, ta means 'he, she, him, her and it' in Chinese. If there is not an antecedent for ta in the above sentence, it does not have a full interpretation.

<sup>2</sup> Malayo-Polynesian languages are SPEC-final while Chinese is SPEC-initial. The former have an INFL node, while the latter does not.

<sup>3</sup> Pre-T3 (possessive topic) in the SPEC of CP is neither base-generated nor moved from the PP position. I will discuss it in Chapter 5.

<sup>4</sup> The exception is ba-construction that is only good for pre-O. As to be discussed in 5.1.1, one of the important differences between PP and VP in Chinese is the fact that the former can appear either after or before the subject while the latter can only occur after the subject. Chao (1968) treats ba in ba-construction as a second verb of the sentence, since ba was originally a verb in archaic Chinese and can still be a verb in modern Chinese. I suggest that ba-construction cannot move up to the initial position of the sentence because ba retains some property of verb.

<sup>5</sup> See footnote 5 of Chapter 3.

<sup>6</sup> The pre-T1 in this sentence is licensed by Perfective Aspectual morpheme le.

<sup>7</sup> The position of time adverbials is very free in Chinese sentences.

<sup>8</sup> The ASP de here is not Perfective, so it neither licenses pre-T1 nor pre-O.

## Chapter 5

### Non-verbally Governed Topics (Pre-T2 & Pre-T3)

Thus far we have discussed pre-S, pre-O and pre-T1 which are all theta-marked by the verb in the sentence. In this chapter we will investigate two other kinds of topic which are not governed by verb but governed by the clausal predicate or determined by possessive relationship, which I call pre-T2 and pre-T3 respectively.

#### 5.1 Prepositional Topic (Pre-T2)

There is a type of topic that is involved with prepositions. I call them prepositional topic (pre-T2). Sometimes a preposition is confused with the verb, so I will first make a brief review of the history of prepositions in Chinese.

##### 5.1.1 PP and VP in Chinese

Most Chinese prepositions are derived from verbs in the archaic language. The most common prepositions in modern Chinese include zai 'at/in', cong 'from', dui 'to/for', zhayu 'as for', wei 'for', bi 'than', an 'according to', yong 'with', etc.. All of these elements were verbs in classical Chinese (cf. Wang (1962), Yang (1963)). The underlined words in (1a), (2a) and (3a) are used

as verbs in Classical Chinese, while in (1b), (2b) and (3b) as prepositions in modern Chinese:

- (1) a. 能 者 在 職 (Wang An-shi)  
 Neng zhe zai zhi  
 able person be-at post  
 'Every able person gets his post'
- b. Wo zai Jiaoda xuexi  
 I in Canada study  
 'I study in Canada'
- (2) a. 乃 從 荀 卿 學 帝 王 之 術 (Li Si)  
 Nai cong Xunqing xue diwang zhi shu  
 then follow X. learn emperor of method  
 'Then, (he) followed Xunqing to learn the methods of  
 administration for the country'
- b. Wo cong Zhongguo lai  
 I from China come  
 'I come from China'
- (3) a. 門 對 寒 流 (Wei Ying-wu)  
 Men dui han liu  
 door face cold river  
 'The door faces a cold river'
- b. Zhe gongzuo dui ta bu heshi  
 this work for he not good  
 'This work is not good for him'

Even in modern Chinese, some prepositions can be used as verbs with the same meaning as that in the archaic language. The prepositions in the (b) examples can be found as verbs in modern Chinese, as in the following:

- (4) Mingtian yi tian wo dou zai jia  
 tomorrow a day I all be-at home  
 'I will be at home all day tomorrow'
- (5) Zhangsan shisi sui cong jun  
 Z. fourteen year join army  
 'Zhangsan joined the army at the age of fourteen'
- (6) Chuanghu dui-zhe gongyuan  
 window face ASP park  
 'The window faces a park'

Since the prepositions in modern Chinese are historically derived from verbs, and since they still function like verbs sometimes, it is not easy to make a clear distinction between prepositions and verbs.

There is a sort of sentence pattern called serial verb constructions (Li & Thompson 1981) which allow two or more verb-object structures to co-occur in series in one sentence. When a preposition with its complement (PP) occurs before a predicate verb, the PP often looks like a verb-object structure in serial verb constructions. Compare the following sentences:

- (7) a. Ta [cong Zhongguo] [lai JIada]  
           he from China come Canada  
           'He came to Canada from China'
- b. Ta [bangzhu Zhongguo] [gao jianshe]  
           he help China make construction  
           'He helps China to make constructions'

The preposition cong with its complement 'China' appear before the predicate verb phrase 'come to Canada' in (7a). The syntactic position of such a PP is very similar to that of the verb-object structure 'help China' in (7b). The question of what is the difference between the underlined cong 'from' and bangzhu 'help' has been discussed in the literature (Wang 1954, Lu 1955 and Li 1956, Chao 1968, Li & Thompson 1974b, among others).

Chao (1968) distinguishes PPs from VPs on the basis of whether the phrase has an aspect, or whether it can serve as the main predicate. In terms of Chao, a PP, not a VP, shows a lack of aspect, and a VP, not a PP, can serve as the main predicate, as shown in (8) and (9) below:

- (8) a. \*Ta [cong-guo Zhongguo] [lai Jianada] (cf. (7a))  
 he from ASP China come Canada  
 ('He came Canada from China')
- b. Ta [bangzhu-guo Zhongguo] [gao jianshe] (cf. (7b))  
 he help ASP China make construction  
 'He helped China to make constructions'
- (9) a. \*Wo cong Zhongguo  
 I from China  
 ('I am from China')
- b. Ta bangzhu Zhongguo  
 he help China  
 'He helps China'

The preposition cong 'from' cannot bear the aspect morpheme guo in (8), while the verb bangzhu 'help' can. In (9) the preposition cannot stand as the head of the predicate but the verb can.

In the view of Chao, yong 'with' in a sentence such as (10) may be a verb, because it can appear with an aspect morpheme and can stand as the main predicate of a sentence, as shown in (11) below:

- (10) Zhangsan [yong zhe-ba dao] [sha-le wu-ge ren]  
 Z. with this CLknife killASP fiveCL person  
 'Zhangsan killed five people with this knife'
- (11) Zhangsan yong-guo zhe-ba dao  
 Z. use ASP thisCL knife  
 'Zhangsan used this knife'

Note however that the phrase yong zhe-ba dao 'with this knife' in (10) may appear in the initial position, which a VP can never do. Observe the following contrast:

- (12) a. [Yong zhe-ba dao] Zhangsan sha-le wu-ge ren  
 with thisCL knife Z. killASP fiveCL person  
 'With this knife, Zhangsan killed five people'
- b. \*[Bangzhu Zhongguo] ta [gao jianshe] (cf. (8b))  
 help China he make construction  
 ('He helps China to make construction')



- (13) \*{Yong-guo zhe-ba dao} Zhangsan (cf. (11))  
           use ASP thisCL knife Z.  
           ('Zhangsan used this knife')

Bangzhu Zhongguo 'help China' is a typical VP in Chinese, hence it may not appear in the initial position as in (12b). Yong zhe-ba dao 'with/use this knife' can be used as an independent VP, as in (11), but when there is another VP co-occurring to its right, it is a PP. As a PP, yong zhe-ba dao 'with this knife' can appear in the initial position as in (12a), but as a VP, it cannot be fronted, as in (13).

I assume that the possibility to appear in the initial position is one of the determining properties of a PP, so the phrase such as yong zhe-ba dao 'with this knife' in (10) or (12) is a PP, instead of a VP in this thesis.

### 5.1.2 Topic Function of PP

Since a PP often indicates the relationship between the verb and its own complement, many scholars treat it as an adverbial or a modifier of the verb or the sentence. Li & Thompson's (1981:360) statement about this issue is presented below:

- (14) Coverbs function as prepositions: a coverb and its noun form a phrase that modifies the verb of the sentence.

Hu (1984:329) has a similar viewpoint:

- (15) A prepositional phrase functions as a modifier of the verb or the adjective. For instance: Wei renmin 'for people' in wei renmin fuwu 'serve the people' is a prepositional phrase which is modifying fuwu 'serve'.

Before I comment on these points of view, I will examine two relevant grammatical facts of the PP: the position of the PP in a

sentence, and the appearance of the preposition in a PP.

In fact, most of the PPs which often take place in the medial position can also appear in the initial position of the sentence. There are a limited number of PPs that seem only to take the initial position, for example, some PPs with the prepositions guan'yu 'with regard to', zhiyu 'as for' or with a complex prepositional structure such as dang...de shihou 'at the time when...', etc., as shown below:

- (16) a. (Guanyu) zhe-ge wenti, wo mingtian gei ni dafu  
with-regard-to thisCL matter I tomorrow give you response  
'With regard to this matter, I will give you a response tomorrow'
- b. \*?Wo guan'yu zhe-ge wenti mingtian gei ni dafu  
I with-regard-to thisCL matter tomorrow give you response  
( 'I will give you a response tomorrow with regard to this matter' )
- (17) a. (Zhiyu) Lisi, women yihou hui chuli ta de wenti  
as-for L. we afterward can deal-with he POS matter  
'As for Lisi, we will deal with his matter afterward'
- b. \*Women zhiyu Lisi yihou hui chuli ta de wenti  
we as-for L. afterward can deal-with he POS matter  
( 'As for Lisi, we will deal with his matter afterward' )
- (18) a. (Dang) wo hai shi haizi de shihou, women dianhua ye meiyou  
when I still be child POS time we telephone CM have-no  
'At the time when I was still a child, we did not even have a telephone'
- b. \*Women dang wo hai shi haizi de shihou dianhua dou meiyou  
we when I still be child POS time telephone CM have-no  
( 'At the time when I was still a child, we even did not have a telephone' )

It is obvious that the PPs which occur in the initial position of the sentence have a relation with the whole sentence rather than with the verb or adjective, irrespective of whether they are base-generated in the initial position or not.

In addition, the prepositions of the PPs that can occur in the initial position are not always obligatory; in the other words, some NPs appearing to the left of the subject can optionally appear with a preposition before them in the sentence as shown in (16a), (17a) and (18a) above.

Since the clauses following the underlined NPs (or PPs with the prepositions deleted) in (16a), (17a) and (18a) already contain a subject and an object, and the focus of the sentence falls on the initial NPs, I assume that these NPs are a type of topic in the sentences, instead of a modifier of the verbs. I call them prepositional topics (pre-T2).<sup>7</sup>

## 5.2 The Licensing of Pre-T2

The verb in the comment clause of pre-T2 assigns theta roles to its own subject and object, so a pre-T2 does not have a direct relation to the verb, which is different from pre-S, pre-O and pre-T1, as I have discussed earlier. Pre-T2 must have its own licenser.

### 5.2.1 Selection by Predicate

Chomsky (1981:38) suggests that:

- (19) If A directly or indirectly theta-marks B, we say that theta selects B. A verb, for example, selects its complements and also selects its subject if it participates in assigning a theta role to the subject.

This is called s-selection.

I have argued in 2.1.3 and 4.2.2 that a pre-T1 is not base-generated in the topic position but is moved from the object

position, so the pre-T1 is in fact s-selected by the verb.

Since a pre-T2 is not assigned a theta role by the verb, it is not s-selected by the verb. Neither is the pre-T2 determined by the preposition, even though it is complement to a preposition. Following the idea in Chomsky (1986a:97) that predication can assign theta role, I claim that a pre-T2 is s-selected by the clausal predicate, thus being licensed by the predication.

The predicate of a pre-T2, namely, the comment clause, is a complete clause' with a full interpretation. Every clause involves one or more other elements such as time, space, instrument and aboutness, and each of these elements can be expressed by an NP. When such an NP appears at the beginning of the sentence, there must be a predication relation between the NP and the clause. Thus, only with such a predication can an NP be related to the clausal predicate. This NP is the topic of the sentence, i.e., the pre-T2.

Therefore, I claim that any complete clause with a full interpretation has theta roles such as Locative, Instrument or Aboutness, and that these theta roles may be assigned to an appropriate pre-T2 to the left of the clause. Thus, a pre-T2 is s-selected by the comment clause, but not by any particular element, e.g., the verb or the preposition. Observe the contrast:

- (20)     (Yong) Zhe-ba dao Zhangsan sha-le wu-ge ren  
           with this CL knife Z.     killASP five CL person  
           'With this knife, Zhangsan killed five people'
- (21) a. \*Yong Zhe-ba dao Zhangsan bei sha-le  
           with thisCL knife Z.     PAS kill ASP  
           ('With this knife, Zhangsan was killed (by somebody)')

- b. 'Zhe-ba dao Zhangsan bei sha-le  
 thisCL knife Z. PAJ kill ASP  
 ('With this knife, Zhangsan was killed (by somebody)')

If the pre-T2 'knife' in (20) were selected by the verb 'kill' in the comment clause, 'knife' in (21) should also be grammatical because it is the same verb. The ill-formedness of (21) shows that the pre-T2 is not selected by the verb.<sup>4</sup>

Neither is pre-T2 selected by the preposition, as shown in the following:

- (22) Yong zhe-zhang zhi Zhangsan zuo-le yi-duo hua  
 with this CL paper Z. makeASP a CL flower  
 'With the piece of paper, Zhangsan made a paper-flower'
- (23) Yong zhe-ba dao Zhangsan sha-le wu-ge ren  
 with thisCL knife Z. killASP fiveCL person  
 'With this knife, Zhangsan killed five people'
- (24) \*Yong zhe-zhang zhi Zhangsan sha-le wu-ge ren  
 with this CL paper Z. killASP fiveCL person  
 \*'With this piece of paper, Zhangsan killed five people'

In (22) and (23) the prepositions of the pre-T2s are the same yong 'with', but the pre-T2 in (22) is 'paper', while in (23) it is 'knife'. The comment clauses in (23) and (24) are the same, and only allow 'this knife' in (23), not in (24). This fact shows that it is the properties of the comment clause, not the preposition that are the factor determining.

### 5.2.2 Theta Role and Case Assignments to Pre-T2

If the pre-T2 is selected by the predicate, how is it linked with the predicate syntactically? Unlike the verb, as in (19) above, a preposition is required for a comment clause to assign a theta role to a pre-T2. As mentioned earlier, the preposition of

time, something like the English for in for three days; therefore, a clause cannot assign a Locative theta role to such a pre-T2, even though the clause itself allows it, as shown in (28) below:

- (28) (no appropriate preposition) \*San tian Lisi shui-le  
three day L. sleep ASP  
(‘Lisi has slept for three days’)

In Chinese, an NP such as san\_tian 'three days' in (28) has to be a supplement at the end of a sentence, as in (29) which has the D-structure in (30):

- (29) Lisi shui-le san tian  
L. sleepASP three day  
'Lisi has slept for three days'

- (30)
- ```
      ASP"
     /\
    NP   ASP'
    |   /\
Lisi |   VP
    |   /\
    le VP  NP
    |   |   |
    shui san tian
    sleep three day
```

Only when the pre-NP is assigned a theta role through the appropriate preposition can it be predicated by the comment clause. Thus, the pre-T2 is then be assigned Case by the predication.

5.2.3 Semantic Function of Prepositions

In this approach, a comment clause cannot assign theta roles to the pre-T2 directly. Instead, there must be a medium between the assignment, i.e., the prepositions which restrict the semantic interpretation for the pre-T2s. In this section I am going to present an outline of the semantic functions of some common prepositions in Chinese with the examples for each case as follows:

Locative (time): zai 'at/in/on'
cong 'since/from'
zicong...yihou/yilai 'since'
dang...shihou 'at the time when...'

- (31) (Zai) 1980 nian, wo laidao-le Meiguo
 in 1980 year I come ASP America
 'In 1980, I came to America'
- (32) (Cong) Zuotian women kaishi fangjia-le
 since yesterday we begin have-vacation ASP
 'Since yesterday, we have begun our vacation'
- (33) (Zicong) Na yihou, women shiqu-le lianxi
 since then after we lose ASP contact
 'Since then, we have lost contact with each other'
- (34) (Dang) Wo hai shi haizi de shihou, women dianhua dou meiyou
 when I still be child POS time we telephone CM have-no
 'At the time when I was still a child, we even did not
 have a telephone'

Locative (space): zai 'at/in/on'
you 'from'
yanzhe 'along'

- (35) (Zai) Jianada dajia bu bi xuexi zhengzhi
 in Canada everybody not have-to study politics
 'In Canada, everybody does not have to study politics'
- (36) (You) Tianjin dao Beijing, women hua-le wu-ge xiaoshi
 from Tianjin to Beijing we spendASP fiveCL hour
 'From Tianjin to Beijing, it took us five hours'
- (37) (Yanzhe) Zhe-tiao lu ni keyi qu tushuguan
 along this CL path you can go library
 'Along this path, you can go to the library'

Instrument: yong/na 'with'

- (38) (Yong/Na) zhe-ba dao, Zhangsan sha-le wu-ge ren
 with this CL knife Z. killASP fiveCL person
 'With this knife, Zhangsan killed five people'

Aboutness: guanyu/duiyu 'with regard to/about/for/to'
zhiyu 'as for'
dui 'in/on/to'

- (39) (Guanyu/Duiyu) zhe wenti, wo bu xiang fabiao yijian
 about this matter I not want express opinion
 'About this matter, I do not want to express my opinion'

- (40) (Zhiyu) Lisi, women yihou hui chuli ta de wenti
 as-for L. we afterward can deal-with he POS matter
 'As for Lisi, we will deal with his matter afterward'
- (41) (Dui) gongzuo, ta hen fuze
 to work he very conscientious
 'To his work, he is very conscientious'

5.3 The Licensing of Possessive Topic (Pre-T3)

Pre-T3 is another kind of non-verbally governed topic in Chinese. Similar to pre-T2, a pre-T3 is followed by a complete clause with a full interpretation, therefore, it is not governed by the verb. It differs from a pre-T2 by the facts that a pre-T3 is never preceded by a preposition in either D-structure or S-structure, and that there is a possessive relationship between the pre-T3, not others, and another NP in the comment clause.

5.3.1 Possessive Relationship

The typical sentence with a pre-T3 is exemplified as in (42):

- (42) Zhangsan baba hen youqian
 Z. dad very rich
 'Zhangsan, (his) dad is very rich'

In some literature,³ a sentence such as (42) is analyzed with Zhangsan baba 'Zhangsan's dad' as the subject; in other words, 'Zhangsan's dad' is an NP in which baba 'dad' is the head. The reason for this view is that Zhangsan baba has a variant Zhangsan de baba 'Zhangsan's dad', so (42) is a variant of (43) below in terms of this analysis:

- (43) Zhangsan de baba hen youqian
 Z. POS dad very rich
 'Zhangsan's dad is very rich'

Ding (1961) argues that it is baba 'dad' in (42) that is the subject of the predicate hen youqian 'very rich' instead of Zhangsan baba, and that in (43) Zhangsan de baba is the subject. His evidence is that we can put an adverbial in front of baba 'dad' in order to modify the whole clause in (42), but not in (43):

- (44) a. Zhangsan [shi sui yiqian] baba hen youqian
 Z. ten year before dad very rich
 'Up until Zhangsan was ten, (his) dad was very rich'
- b. *Zhangsan [shi sui yiqian] de baba hen youqian
 Z. ten year before POS dad very rich
 ('Up until Zhangsan was ten, his dad was very rich')

So (42) would be bracketed as in (45):

- (45) [Zhangsan] [baba hen youqian]

Following Teng (1974),⁶ Huang (1982) treats such topics as extractions from a non-sentential subject, in his discussion of violations of the Left Branch Condition of Ross (1967). Under his view, the structure of (46a) is that in (46b):

- (46) a. Zhangsan, baba hen youqian (Huang 1982:516)
 Z. dad very rich
 'Zhangsan, his father is very rich'
- b. Zhangsan_i, [_{NP} t_i baba] hen youqian
 Z. dad very rich
 'Zhangsan, his father is very rich'

I will adopt this approach as a basis of my analysis for pre-T3.

The possessive relationship is often distinguished into two types: alienable and inalienable (Huang (1982), Gueron (1984), Xu & Langendoen (1985), Cheng & Ritter (1987) among others). But whether a possessive relationship is alienable or inalienable is not always a matter of consensus. Huang (1982:516) considers kinship as inalienable, while Cheng & Ritter (1987:67) do not.

I will assume that the relationships between the possessor (pre-T3) and the possessee (NP in clause) constitute the following three types:

A. The possessee is a fundamental part of the body of possessor (part/body):

- (47) Zhe-zhi ji chibang zui haochi
 this CL chicken wing most delicious
 'This chicken, its wings are most delicious'
- (48) Zhe-pian lunwen diyi zhang hen bucuo
 this CL thesis first chapter very good
 'This thesis, the first Chapter is very good'

In these sentences, 'wings' and 'the first Chapter' are integral parts of 'chicken' and 'thesis' respectively.

B. The possessee is something the possessor may own (ownee/owner):

- (49) Zhangsan qian bei tou-le
 Z. money PAS steal ASP
 'Zhangsan has his money stolen'
- (50) Zhe-ge ren zhishi hen yuanbo
 thisCL person knowledge very profound
 'This person, his knowledge is very profound'

'Money' in (49) is not an integral part of Zhangsan but is owned by Zhangsan. Similarly, 'knowledge' in (50) is the spiritual wealth of a person who may or may not own it.

C. There is a sort of human relationship (including kinship) between the possessor and the possessee:

- (51) Lisi baba hen you qian
 L. dad very have money
 'Lisi, his dad is very rich'
- (52) Zhangsan daoshi feichang hao
 Z. supervisor very kind
 'Zhangsan, (his) supervisor is very kind'

All fathers have children and all supervisors have students. Nobody literally owns his/her counterpart in such a relationship.

Among the three types of possessive relationships, type A (part/body) belongs to inalienable while type B (ownee/owner) belongs to alienable. Whether type C (human relationship) belongs to inalienable or not, depends on one's approach.

5.3.2 Subject-object Asymmetry

Since the pre-T3 is a possessor extracted from an NP where the head noun (possee) remains, it must be governed by the possessee noun. Huang (1984:563) assumes that:

- (53) inalienable possession nouns differ from other nouns in that they obligatorily assign a thematic role Possessor to an argument, whereas other nouns need not do so.

So the possessive relationship is a crucial condition for a pre-T3. An important question here is at what distance the possessee noun can govern the possessor noun, in other words, from what position the possessor can be extracted to topic position, and why?

Huang (1982, 1984 and 1987)) claims that there is a subject-object asymmetry in Chinese, such that when the head of an NP is an inalienable possessed noun, extraction is possible from subject, but not object position:

- (54) a. Zhangsan, baba hen youqian (Huang (1982:516))
 Z. father very rich
 'Zhangsan, his father is very rich'
- b. *Zhangsan, wo kanjian baba le (Huang (1982:516))
 Z. I see father ASP
 ('Zhangsan, I saw his father')

According to Huang, (54b) is ill-formed because the possessor of

'father' can only be interpreted as the subject 'I' but not the topic Zhangsan. Huang suggests (p.516) the "closest NP around" the possessee is the possessor.

The contrast shown in (54) above belongs to the type C (human relationship) of the pre-T3 sentences I discuss above. The same facts hold for type B (owner/ownee) as follows:

- (55) a. Ci ren jingshen ke jia
 this person spirit praiseworthy
 'This person, his spirit is praiseworthy'
- b. *Ci ren wo hen peifu jingshen
 this person I very admire spirit
 ('This person, I admire his spirit')

It is interesting that there are some exceptions to this asymmetry,⁷ where it concerns the relationship of type A. In such sentences, a pre-T3 can be extracted from the object position as well as from the subject position, as shown by the following contrasts:

- (56) a. Zhe-zhi ji, chibang zui haochi
 this CL chicken wing most delicious
 'This chicken, its wings are most delicious'
- b. Zhe-zhi ji, wo chi chibang
 this CL chicken I eat wing
 'This chicken, I'll eat its wings'
- (57) a. Zhe-pian lunwen diyi zhang hen bucuo
 this CL thesis first chapter very good
 'This thesis, the first Chapter is very good'
- b. Zhe-pian lunwen wo zhi kan-le diyi zhang
 this CL thesis I just readPER first chapter
 'This thesis, I have just read the first Chapter'

In the (a) examples, the topics are extracted from the subject position, while in the (b) examples,⁸ the topics are extracted from the object position.

An important question is why there is a possessive relationship between the topic and the object in sentences such as (56b) and (57b), where the possessors can be easily understood as the topics, but not in sentences such as (54b) and (55b). I attempt to discuss this phenomenon in the following section.

5.3.3 Possessive Licensing Condition

Huang points out that sentences such as (54b) are ungrammatical because we cannot interpret a possessive relationship between the topic and the NP in object position. If the possessive relationship is established by adding another anaphoric pronoun plus possessive marker de before the object, the sentence will be well-formed. For example, (61) and (62) below are the revised sentences of ill-formed (54b) and (55b):

- (58) Zhangsan, wo kanjian ta de baba le
 Z. I see he POS father ASP
 'Zhangsan, I saw his father'
- (59) Ci ren wo hen peifu ta de jingshen
 this person I very admire he POS spirit
 'This person, I admire his spirit very much'

The fact shows that the possessive relationship plays an important role here. In sentences such as (56b) or (57b), where the possessor can move from object position to topic position, the possessive relationship must be type A, which I argue is much stronger than type B and type C.

In (54b) and (55b) which bear the possessive relationship of type B and type C, the possessors of 'father' and 'spirit' can be interpreted as either the subjects or the topics in the sentences,

even as somebody that has not been mentioned in the sentences (see Xu & Langendoen 1985).¹² But in the sentences (56b) and (57b), which have the relationship of type A, the possessors of 'wings' and 'the first Chapter' must be the topics 'chicken' and 'thesis' respectively, because whenever we mention a part/body relationship, both the possessor and the possessee must be generated together. Thus, the possessor of 'wings' or 'the first Chapter' in (56b) and (57b) cannot be interpreted as the subject 'I' or someone else. If the possessor NPs are extracted not to the topic position as in (56b) and (57b), but to the medial position as in (60) and (61) below, there is still no confusion:

- (60) Wo zhe-zhi ji chi chibang
 I this CL chicken eat wing
 'This chicken, I 'll eat its wings'
- (61) Wo zhe-pian lunwen zhi kan-le diyi zhang
 I this CL thesis just readASP first chapter
 'This thesis, I have just read the first Chapter'

The examples show that the relationship between part and body is so strong that subject-object asymmetry does not affect its existence.

In the cases where possessor can be understood as the subject as well as the topic, the sentence will be ambiguous. Observe the following contrast:

- (62) Zhe-zhi gou, wo zhan-diao-le weiba
 this CL dog I chop off ASP tail
 'This dog, I chopped off its tail'
- (63) *Zhe-zhi gou, zhe-zhi mao yao-le weiba
 this CL dog this CL cat biteASP tail
 ('This dog, this cat bit its tail')

In (62) the 'tail' can only be interpreted as belonging to the 'dog' since human beings do not have tails, but in (63) the 'tail'

does not necessarily belong to the 'dog' since cats also have tails.

Some times the meaning of verb in the sentence helps to establish the potential possessive relationship between the object and the topic. For instance:

- (64) a. *Zhe-zhang zhuozi wo shang-le tui
 this CL table I hurt ASP leg
 ('This table, I damaged its leg')
- b. Zhe-zhang zhuozi wo zhi qi tui
 this CL table I only paint leg
 ('This table, I will only paint its legs')

The words tui 'leg' and shang 'hurt.' are used for both animate and inanimate objects in Chinese, so tui in (64a) can ambiguously be interpreted as either 'table's legs' or 'my legs' have been 'hurt'. In (64b), however, it is not natural to interpret an entity as painting its own legs, therefore, the possessive relationship with the topic is readily established.

This case is strikingly similar to the ambiguity of object movement I discussed in 3.3.1. I assumed a semantic restriction for the object movement in Chinese, repeated below:

- (65) Y is NOT allowed to move α if $_{ASP}[X \text{ verb}; Y]$ can properly be changed as $_{ASP}[Y \text{ verb}; X]$

Observe the following contrasts:

- (66) a. Zhangsan da-guo Lisi
 Z. hit ASP L.
 'Zhangsan hit Lisi'
- b. Lisi da-guo Zhangsan
 L. hit ASP Z.
 'Lisi hit Zhangsan'

When the object Lisi in (66a) is topicalized to the front of the

sentence, and the object Zhangsan in (66b) is moved to the position between the subject and the verb, we get an ambiguous sentence as in (67):

- (67) *Lisi Zhangsan da-guo
 L. Z. hit ASP
 ('Zhangsan hit Lisi or Lisi hit Zhangsan')

In fact, there are also two positions for the extraction of possessor NP from object position: initial position of the sentence or the medial position between the subject and the verb, so we can say either (56b) and (57b) or (60) and (61). The structures are shown as in the following:

- (68) a. possessor, subject V [t; possessee]
 b. subject possessor, V [t; possessee]

Similar to the generalization of (65), if the subject and the possessor in original position are substitutable in (68), the extraction of the possessor is not permitted. The ungrammatical sentences (54b), (55b) and (63) can all be said as follows:

- (69) a. Wo kanjian Zhangsan de baba le (cf. (54b))
 I see Z. POS father ASP
 'I saw Zhangsan's father'
 b. Zhangsan kanjian wo de baba le
 Z. see I POS father ASP
 'Zhangsan saw my father'
- (70) a. Wo hen peifu ci ren de jingshen (cf. (55b))
 I very admire this person POS spirit
 'I admire this person's spirit very much'
 b. Ci ren hen peifu wo de jingshen
 this person very admire I POS spirit
 'This person admires my spirit very much'
- (71) a. Zhe-zhi gou yao-le zhe-zhi mao de weiba (cf. (63))
 this CL dog bite ASP this CL cat POS tail
 'This dog bit this cat's tail'

- b. Zhe-zhi mao yao-le zhe-zhi gou de weiba
 this CL cat bit ASP this CL dog POS tail
 'This cat bit this dog's tail'

When the possessors in (a) sentences are extracted to the initial position and the possessors in (b) sentences are extracted to the position between the subject and the verb, we will get the nonsensical sentences (54b), (55b) and (63).

According to (65), only if $_{ASP}[X \text{ verb}, Y]$ cannot be changed as $_{ASP}[Y \text{ verb}, X]$, Y undergoes any movement to a licensed position:

- (72) a. Zhangsan kan-guo zhe-ben shu
 Z. read ASP this CL book
 'Zhangsan has read this book'
- b. *Zhe-ben shu kan-guo Zhangsan
 this CL book read ASP Z.
 (Makes no sense)
- (73) a. Zhe-ben shu Zhangsan kan-guo
 this CL book Z. read ASP
 'This book, Zhangsan has read'
- b. Zhangsan zhe-ben shu kan-guo
 Z. this CL book read ASP
 'Zhangsan has read **this book**'

In a similar fashion, substitution is not available to the grammatical sentences (56b) and (57b) (or (60) and (61)):

- (74) a. Wo chi zhe-zhi ji de chibang
 I eat this CL chicken POS wing
 'I eat this chicken's wings'
- b. *Zhe-zhi ji chi wo de chibang
 this CL chicken eat I POS wing
 (Makes no sense)
- (75) a. Wo zhi kan-le zhe-pian lunwen de diyi zhang
 I just read ASP this CL thesis POS first chapter
 'I have just read the first Chapter of this thesis'
- b. *Zhe-pian lunwen zhi kan-le wo de diyi zhang
 this CL thesis just read ASP I POS first chapter
 (Makes no sense)

Thus, I assume the following generalization developed from (65) for the extraction of possessor from object position:

- (76) A possessor NP in object position is NOT allowed to be extracted if $_{ASP}[_{1,0}; NP_i \text{ verb}_j [_{possessor}NP_k \text{ possessee}NP]]$ can properly be changed as $_{ASP}[_{1,0}; NP_k \text{ verb}_j [_{possessor}NP_i \text{ possessee}NP]]$

This generalization indicates that the substitutability of the NP in subject position and the possessor in object position is the crucial reason for the ill-formedness of the pre-T3 from object position. In fact, such an approach can also account for the well-formedness of the extraction of possessor NP from the subject position. The NP movement in Chinese is always from the right to the left. When the possessor NP in the subject position is to be extracted, the topic position is the only position where the possessor NP can go, therefore, it is impossible for the extraction to create any ambiguity.

Based on Huang (1984), we can conclude that the pre-T3 is licensed in its original position within an NP by receiving a Possessor theta role from the possessee head. It then moves to the topic position, as long as the movement does not create an ambiguity. In Chinese, a pre-T3 can be extracted from the subject position of the comment clause to the topic position freely, but can be extracted from the object position only when there is an unambiguous possessive relationship between the object and the pre-T3, not between the object and the subject.

Footnotes to Chapter 5:

- ¹ Li & Thompson (1981) call prepositions coverbs.
- ² Since this thesis lays stress on preverbal NPs, I will not discuss further the PPs where the pre-T2s are derived.
- ³ A complete clause means the clause with a subject and a predicate.
- ⁴ The contrast of (20) and (21) proves that the pre-T2 in (20) is not selected by the verb but does not explain why sentences in (21) are ungrammatical. This is a question which remains to be studied relating to passive. However, Chinese has the sentences which are very similar to (21) but they are grammatical, as shown below:
- (i) (Wei) Zhe shi, Zhangsan bei guan-le wu nian
because-of this thing Z. BEI imprison ASP five year
'Because of this thing, Zhangsan was taken to prison for five years'
- ⁵ Li (1956), Gao (1957) and Zhang (1959).
- ⁶ Teng (1974:467) mentions a kind of "subject" which is derivable by topicalization and deletion of the genitive marker.
- ⁷ Huang (1984:563) notes this exception in footnote 33.
- ⁸ There is no special requirement for such pre-T3s. For sentences (56b) and (57b), we can also say:
- (i) Ji, wo xihuan chi chibang
chicken I like eat wing
'Chicken, I like to eat wings'
- (ii) Lunwen, wo tongchang xian kan gaiyao
thesis I usually first read abstract
'Thesis, I usually read the abstract first'
- ⁹ This anaphoric pronoun is similar to the anaphor I argued in 4.2.2, because it cannot stand in the sentence without an antecedent. For example, (58) cannot be said as the following:
- (i) ?Wo kanjian ta de baba le
I see he/she/it POS father ASP
'I saw someone's father'
- ¹⁰ Such an explanation is provided for the ungrammaticality of the example in (54b) Xu and Langendoen (1985). This is similar to that in Huang (1982, 1984).

Chapter Six

Conclusion

Pre-NPs are an important phenomenon in Chinese syntax. The study of such a topic deals with a fairly wide range of data which are, of course, not all analyzed in this thesis. In this chapter I will talk about some further questions pertaining to the topic of pre-NPs as a conclusion to this thesis.

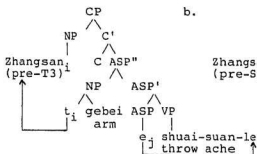
I classified the pre-NPs into five types in terms of their different properties, i.e., pre-S, pre-O, pre-T1, pre-T2 and pre-T3. In most cases, they are distinct from each other as discussed in the previous chapters, however, there are occasionally some ambiguous structures in the classification.

A pre-O is the underlying object appearing in the medial position in the sentence. In cases where there is a possessive relationship between the pre-S and the pre-O, the pre-S might also be interpreted as a pre-T3. Note the following contrast:

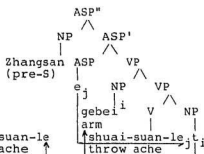
- (1) a. Zhangsan gebei shuai-suan-le
Z. arm swing ache ASP
'Zhangsan swung so hard that his arm ached'
- b. Zhangsan de gebei shuai-suan-le
Z. POS arm swing ache ASP
'Zhangsan swung so hard that his arm ached'
- c. Zhangsan shuai-suan-le gebei
Z. swing ache ASP arm
'Zhangsan swung so hard that his arm ached'

Example (1a) has two different counterparts: (1b), which shows the possessive source, and (1c), which shows the object derivation. If Zhangsan in (1a) is regarded as being extracted from the underlined NP in (1b), it is a pre-T3; if 'arm' in (1a) is viewed as moved from the object position, as in (1c), Zhangsan is a pre-S. Hence the following two structures are available to (1a):

(2) a.



b.

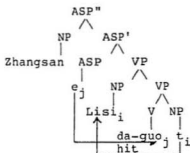


It is very interesting that these examples are simply ambiguous in structure. Note that this ambiguity does not entail two distinct semantic meanings for the sentence. This is quite different from the ambiguities I discussed in 3.3.1 and 5.3.3 where the ambiguous structures entail two contradictory meanings, thus making the sentence nonsensical. The following example shows the ambiguity of a pre-T1, pre-O and pre-S:

- (3) *Zhangsan Lisi da-guo
 Z. L. hit ASP
 ('Zhangsan hit Lisi' or 'Lisi hit Zhangsan')

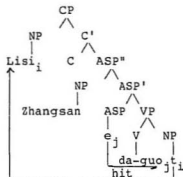
In fact, there are two possibilities for both Zhangsan and Lisi, that is, Zhangsan is a pre-S or a pre-T1, and Lisi is a pre-O or a pre-S; in other words, if Zhangsan is a pre-S, Lisi will consequently be a pre-O, and if Zhangsan is a pre-T1, then, Lisi must be a pre-S. Observe such an ambiguity in the following trees:

(4) a.

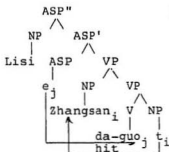


'Zhangsan hit Lisi'

b.

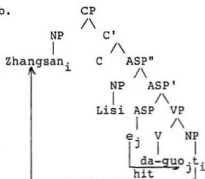


(5) a.



'Lisi hit Zhangsan'

b.

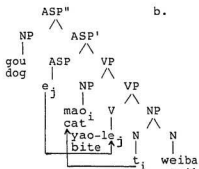


The interpretation of (4) is precisely opposite to that of (5), but the word sequences of (4a) is exactly the same as that of (5b), and that of (4b) is the same as that of (5a).

This unacceptable ambiguity also exists in the possessor extraction from the object position. For instance, the following sentence is nonsensical because it has two ambiguous structures:

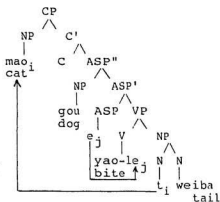
- (6) *Zhe-zhi gou na-zhi mao yao-le weiba
 This CL dog that CL cat bite ASP tail
 ('This dog bit that cat's tail' or 'That cat bit this dog's tail')

(7) a.

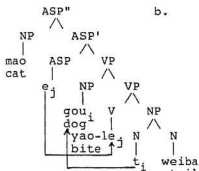


'The dog bit the cat's tail'

b.

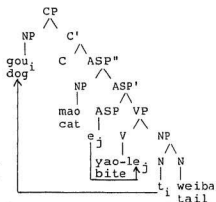


(8) a.



'The cat bit the dog's tail'

b.



The word sequences of (7a) and (8b), as well as (7b) and (8a), are identical in S-structure but bear opposite meanings to one another.

The question of why some ambiguous structures do not create different meanings, while some create opposite meanings shows that pre-NPs in Chinese are quite distinct from one another. In addition, there are some complex potential relations among them. This is a very interesting topic for the future study.

Ross (1982) suggests that languages can be divided into "hot-cool" types based on whether the medium process involves little or active audience participation. So a "hot" language, e.g., English, cannot drop pronouns in a grammatical sentence, while in a "cool" language, such as Chinese, the pronouns can be easily dropped under the right condition discourse. Huang (1984:534) says:

- (9) One important type of explanation that has been proposed to distinguish between "hot" languages like English and French and "pro-drop" languages like Italian and Spanish is based upon the idea of recoverability and the observation, due to Taraldsen (1978), that the possibility of pro-drop in a language often correlates with the existence in it of a rich inflectional morphology, in particular a rich system of agreement.

According to the theory of Taraldsen (1978), languages such as Chinese, Japanese and Korean should be the sort of languages where is no pro-drop at all, since they have no system of verb-subject or verb-object agreement. However, as Huang points out, the situation is exactly the opposite. Pro-drop shows up much more freely in these languages than in some of the languages which have rich agreement system.

The free pro-drop correlates with the characteristics of pre-NPs in Chinese that there can be many flexible NPs occurring in the front of sentences, as I discussed in the very beginning of this thesis (see 1.1). Thus, the interesting relevant question is why there are so many NPs that can be moved so freely in Chinese sentences, because in the light of Taraldsen (1978), Chinese word order should not be so flexible since it does not have an agreement system at all.

Pollock (1989) presents a new approach in the analysis of traditional inflection, which is normally considered as one constituent with two different sets of features, i.e., [\pm Tense, \pm Agreement]. Instead, Pollock proposes that each set of features is a syntactic head of a maximal projection, which are called T(ense)P and Agr(eement)P. Further, Pollock argues that each of the maximal projections is a potential barrier for certain types of movements in both English and French (see also Guilfoyle, Hung & Travis 1989).

In terms of Pollock's approach, we might explain the fact that an object does not readily move up to the initial position in English or French because these languages have too many maximal projections in the sentence. The simplest example is shown as below:

- (10) a. John kissed Mary
 b. *Mary John kissed

The failure of object movement in (10b) might be explained by the barriers created by AgrP and TenP.

Since there are apparently no such projections in Chinese, Chinese sentences would be relatively transparent for NP movement to licensed positions. As a result, an object in a Chinese sentence is able to be either fronted to the medial position as a pre-0, or topicalized to the initial position as a pre-T1. Likewise, an NP can be extracted from the subject (and sometimes the object) position to the topic position as a pre-T3.

As for the ASP" in Chinese sentences, it does not seem to constitute a barrier for topicalization. The similarities and differences between the ASP" in Chinese and the I" in English remains a topic for further research work.

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