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ON THE SYNTAX OF NON-VERBAL PREDICATION IN  
MANDARIN CHINESE

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DOCTOR OF PHILOSOPHY

THE HONG KONG POLYTECHNIC UNIVERSITY

2009

THE HONG KONG POLYTECHNIC UNIVERSITY

Department of Chinese and Bilingual studies

On the Syntax of Non-verbal Predication in Mandarin Chinese

by

ZHANG Qingwen

A thesis

submitted in partial fulfillment of the requirements for the Degree of

Doctor of Philosophy

November, 2008

## CERTIFICATE OF ORIGINALITY

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ZHANG Qingwen

This thesis is dedicated to my late father, who is the most deserved to see the completion of my study but has lost this opportunity forever.

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## ABSTRACT

The central issue of this study is nominal predication in Mandarin Chinese, which specifically refers to the construction composed of a subject and a nominal predicate without the intervention of a copula. Based on Davidson's (1967) event theory, especially the neo-Davidsonian event theory (Parsons 1990; Chierchia 1995, among many others), which claims that each sentence is endowed with a Davidsonian event/state argument, this study intends to give a unified account to the copulaless nominal predication construction in Mandarin Chinese, i.e., the grammaticality of the nominal predicate construction is dependent on whether the Davidsonian argument is visible or not.

Three types of nominal predicate constructions are examined, namely, the constructions whose predicates are temporal/locative nominals, modified noun phrases and possessive noun phrases. The three types of copulaless nominal predication constructions, distinctive as their syntactic manifestations are, have one

thing in common: the Davidsonian argument has to be realized via assorted morpho-syntactic devices. To be specific, the Davidsonian argument of the temporal/locative nominal predicate construction is articulated by means of the spelt-out of the spatio-temporal argument; The realization of the Davidsonian argument of the modified nominal predication construction is dependent on the occurrence of non-intersective modifiers; The possessive nominal predicate construction takes advantage of the interplay between the temporal argument in the matrix clause and that of the possessive DP.

By examination to the nominal predication construction in Mandarin Chinese, it is revealed that nominal predication is parallel to verbal predication in that both of them require the visibility of the Davidsonian argument. Furthermore, it suggests that nominal predication in Mandarin Chinese is no different from English nominal predication. The only distinction between Mandarin Chinese and English lies in their different strategies to realize the Davidsonian argument: English puts all the workload on the spelt-out of tense, while Chinese tends to take advantage of different morpho-syntactic ways so long as the Davidsonian argument can be made visible. This indicates that nominal predication in Chinese is not language particular.

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## CHAPTER 1 INTRODUCTION

### 1.1 Preliminaries

Non-verbal predication in Mandarin Chinese is distinctive from inflectional languages in that the copula intervening in between the subject and the non-verbal predicate is optional as illustrated below:

- (1) a. Jintian xingqiyi.  
Today Monday.  
'Today is Monday/It is Monday today.'
- b. Ta zhongguo ren.  
Ta China person  
'He is a Chinese.'

The above examples are composed of two nominals where the sentence initial nominals are usually taken as the subject, e.g., *jintian* 'today' in (1a), and the second nominals are the predicate nominal, say, *xingqiyi* 'Monday' in (1a). The copula *shi* 'be' between the two nominals are not obligatory as required in the inflectional languages. Take the English counterparts of the above Chinese sentences:

- (2) a. Today \*(is) Monday.  
b. He \*(is) a Chinese.

It has remained a puzzling and controversial issue ever since Li (1924) put forward this phenomenon. Due to the different grammatical manifestations of the nominal predication construction from those of the inflectional languages as English, traditional Chinese grammatical studies used to take it as strong evidence to prove that Chinese is a language typical of hypotaxis which is independent of syntactic structures. This study will explore whether the omission of coupula in nominal predication in Chinese is a language particular phenomenon which is independent of Universal Grammar.

#### 1.1.1 The Davidsonian event theory: The theoretical framework

Davidson (1967) in his famous paper “The logical forms of action sentences” puts forward a revolutionary proposal that action verbs have an extra implicit event/state argument besides the individuals participating in the event and modifiers are predicates of the event argument which are added conjunctively, and at the sentential level there exists an existential closure over the event. The implicit event/state argument is also addressed as Davidsonian event/state argument in the literature in honour of Davidson’s contribution.

According to Davidson (1967), events are like entities/individuals logically in that they also introduce a variable to be modified and quantified. See the following example:

(3) a. Jones buttered the toast slowly in the bathroom with a knife.

b.  $\exists e[\text{BUTTER}(e,j,t)] \wedge \text{SLOWLY}(e) \wedge \text{IN}(e,b) \wedge \text{WITH}(e,k)$

The logical formulae (3b) shows that the event ‘e’ is also an argument like the entities participating in the action, and the verb ‘butter’ expresses a 3-place relation among the entities ‘Jones’ and ‘toast’ and an event argument ‘e’, and all the adverbs are predicated of the event argument rather than property/predicate.

Due to the significance of the event argument, a considerable amount of works have appealed to Davidson’s event theory to account for various event-related issues. This study attempts to investigate nominal predication in Mandarin Chinese in the framework of Davidsonian event theory and strives to give a unified account to the nominal predication construction in Mandarin Chinese.

#### 1.1.2 The Davidsonian argument and predication in Chinese: issues to be solved

Being an isolated language, Chinese lacks the developed tense system as the inflectional languages do and the tense of the sentence is not required obligatorily. The deficit in tense system in Chinese consequently brings forth a problem specifically to Chinese: the incompleteness of sentences. Consider the following examples:



(4) a. \*Wo chi fan.

I eat meal

‘I have dinner.’

b. \*Fangzi ta.

House collapse

‘The house collapses.’

To solve this problem, various assumptions are put forward, including assumptions of tense/focus anchoring (Tang and Lee 2000; Tang 2001), the licensing of referential features (Hu and Shi 2005), etc. Based on their studies, Tsai (2008) proposes that all these conditions are derived from the visibility requirement of the Davidsonian argument. As proposed by Chierchia (1995) that temporal modification is realized through the Davidsonian argument, it is not surprising that the Davidsonian argument has to be articulated to satisfy the tense requirement in inflectional languages like English. Chinese, due to the deficit in tense system, has to pay extra efforts to realize the Davidsonian argument. The issue of incompleteness of sentences thus becomes prominent in Chinese.

The Davidsonian argument, being a verbal entity, is part of what makes something a VP (Chierchia 1995). In other words, all the verbal predicates have an extra Davidsonian argument in their argument structures. Thus, the visibility of the Davidsonian argument can be easily achieved in verbal predication by means of event coordination, event subordination, event modification, event quantification, or verb raising to v/T as discussed in Tsai (2008).

Different from verbal predication, nominals which lack [+V] features do not possess an innate event/state argument as verbal predicates do. This will bring forth the following questions:

- (i) Does nominal predication possess the Davidsonian argument?
- (ii) If yes, is the Davidsonian argument required to be visible to complete the sentence?
- (iii) If the Davidsonian argument has to be realized in nominal predication as well, then what devices can be employed to articulate the Davidsonian argument?

## **1.2 Nominal predication in this study**

### 1.2.1 Previous studies on predicate nominals

A great many of papers have discussed the nominal predication construction in Mandarin Chinese, most of them paying their attention on the classifications of the

predicate nominal. Among these studies, Zhu's (1982) observation is no doubt the most insightful and the most representative.

Zhu (1982) observes that the syntactic constituents functioning as nominal predicate include: (i) nouns and temporal nominals; (ii) attributive noun phrases; and (iii) numeral classifier phrases or numeral classifier noun phrases. The sentences are exemplified below:

(5) a. Ni shazi. (noun)

you fool

'You are a fool.'

b. Jintian zhongqiu. (temporal expression)

today mid-autumn

'Today is Mid-Autumn Festival.'

(6) a. Wo Guangdong ren. (attributive noun phrase)

I Guangdong person

'I am a native of Guangdong.'

b. Xiao Wang huang toufa.

Xiao Wang yellow hair

'Xiao Wang has yellow hair.'

(7) a. Ta ershi sui. (Num-Cl phrase)

he twenty year

‘He is twenty years old.’

b. Yi jin baicai wu mao qian.

one Cl Chinese cabbage five Cl money

‘It costs fifty cents for one *jin* of Chinese cabbage.’<sup>1</sup>

Since Zhu’s classification, numerous articles have published in which nearly all kinds of nominals are taken as nominal predicates. For instance, Ye (1987) enumerates ten syntactic types of the nominal predicate: (1) N; (2) A+N; (3) Num+N; (4) N+N; (5) Pron+N; (6) Num; (7) Adv+Nominal constituent; (8) Adv+Nominal constituent+Part; (9) *de* phrase; (10) nominal coordination. Fang (1992) reclassifies the noun phrases into six subtypes: (1) bare noun; (2) subordinate NP; (3) numeric NP; (4) attributive NP; (5) coordinate NP; and (6) predicational NP.

Based on the previous studies, Chen (2003; 2006) summarizes and subcategorizes the nominal predicates into eight groups. According to his generalization, all the nominals below should be treated as predicates:

- (i) bare nouns or numeral classifier phrases as discussed above;
- (ii) attributive noun phrases which consist of two subtypes: attributive+head; adverbial+head. For example:

---

<sup>1</sup> *Jin* is a Chinese measure unit. One *jin* equals to 500 grams.

(8) a. Ni shenme yisi? (attributive+head)

you what meaning

‘What do you mean?’

b. Zanmen quan zhen cai ba qian ren. (adverbial+head)

we all town only eight thousand person

‘There are only eight thousand people in our town.’

In addition to that, Chen (2003) also takes the existential construction containing a nominal with an adverbial modifier as a type of nominal predication:

(9) Wuzi li haoxie cangying.

room inside many fly

‘There are many flies in the room.’

(iii) the coordinate noun phrases:

(10) Ni xiaozhi hao a, gang-zui-tie-ya, bai-mu-shetou.

you guy good Part, steel-mouth-iron-tooth, cypress-wood-tongue

‘You guy, what a silver tongue you have!’

(iv) figurative expressions:

(11) Zai wo mian qian ta zongshi xiaohair shide.

in I face front she always child like

‘She always behaves like a child before me.’

(v) *de* phrases:

(12) Zhang xiansheng gang lai de.

Zhang sir just come DE

‘Mr. Zhang is a newcomer.’

(vi) other types of nominals:

(13) Bei feng er dao san ji.

north wind two to three rank

‘The north wind is at level two to three.’

(vii) reduplicated nominals:

(14) Baogu bangzi ye da ge da ge de.

corn stick also big size big size DE

‘The corn is also of big size.’

(viii) nominal predicational clauses:

(15) Ta tou tai nanhai, er tai nühai.

she first child boy, second child girl

‘Her first child is a boy, and her second child is a girl.’

Obviously, Chen has regarded all the nominal constituents above as nominal predicates without distinguishing their grammatical functions and their semantic relations with the sentence initial nominals. As a matter of fact, besides the real

nominal predication construction, the sentences discussed above include verb ellipsis constructions as (9a) and (9b), existential construction as (10), adjectival predicational construction as (11) and topic construction (15), etc.<sup>2</sup>

### 1.2.2 Nominal predication constructions to be discussed in this study

To give a convincing account to nominal predication in Mandarin Chinese, I strictly confine the scope of my study to the following types of sentences:

- (i) The nominal predication construction is constituted by two temporal/locative nominals as displayed below:

(16) a. Jintian shengdanjie.

Today Christmas

‘Today is Christmas.’

---

<sup>2</sup> The other practice in the syntactic analysis of nominal predication is to integrate the syntactic distributions with its semantic classifications as conducted by Chao (1968). Since this practice is not closely related to our discussion, his claims are cited here for reference.

Following Chao (1968), a nominal predicate can: (i) represent a class to which the subject is subsumed, and the following manifestations of the nominal predicate are observed in this case: (a) the nominal phrases often end in the nominalizing particle *de*; (b) a nominal predicate can be modified by an adverb; (c) an attributive adjective forms part of a nominal predicate and often carries the point of the message; (d) the negation of a nominal predicate takes the form of *bushi* ‘be not’ rather than a simple *bu* ‘not’; (ii) a nominal predicate calling attention to the existence or extent of something almost always has a quantity expression, such as a numeral followed by a classifier, with or without a following noun; (iii) nominal predicates announcing or expressing a process or event, as in:

(1) a. Zuor yeli da fengbao.  
yesterday night great storm  
‘There was a great storm last night.’

b. Jinr xiawu ticao.  
today afternoon physical exercise  
‘We’ll have/take physical exercise this afternoon.’

What is worth mentioning is that the insertion of the verb *you* ‘have’ either is not permitted (1b) or will weaken the force of the event (1a).

The last point posed by Chao (1968) is that not every succession of two nominal expressions makes a full sentence of subject and predicate. Thus, *congming fazi hao fazi* means ambiguously either (i) ‘The clever way is a good way.’ Or (ii) ‘clever ways and good ways.’

b. Zhe'r tushuguan.

Here library

'Here is the library.'

(ii) The nominal predication constructions whose predicates are modified noun phrases:

(17) a. Zhangsan zhongguo ren.

Zhangsan China ren

'Zhangsan is Chinese.'

b. Zhangsan waike yisheng.

Zhangsan surgery doctor

'Zhangsan is a surgeon.'

c. Zhangsan bashi niandai de daxuesheng.

Zhangsan eighty decade DE university student

'Zhangsan was a university student of 1980's.'

d. Zhe wo gang mai de shu.

This I just buy DE book

'This is the book I just bought.'

(iii) The nominal predication constructions whose predicates are possessive nominal phrases:



(18) a. Zhangsan wo erzi.

Zhangsan my son

‘Zhangsan is my son.’

b. Zhangsan wo daxue tongxue.

Zhangsan my university classmate

‘Zhangsan was my classmate when I was in the university.’

c. Zhangsan women xi zhuren.

Zhangsan our department head

‘Zhangsan is the head of our Department.’

### **1.3 Nominal predication in Mandarin Chinese and the function of the copula**

In this section, I would like to compare the nominal predication constructions with and without the copula *shi* ‘be’ and try to examine the property/grammatical status of the copula. To begin with, I will investigate the nominals eligible to be predicates in Mandarin Chinese.

#### **1.3.1 Predicate nominals in Mandarin Chinese**

In Mandarin Chinese, nominal elements may be in the following forms:

- (19) a. Noun
- b. Classifier-Noun
- c. Numeral-Classifier-Noun
- d. Demonstrative-Numeral-Classifier-Noun
- e. Proper Noun
- f. Pronoun

Generally speaking, all types of nominals may occur in the argument position except (19b) and (19c) which are subject to some constraints when appearing in the subject positions, say, the specificity constraint which requires elements occurring at the subject position to be specific (Chao 1968; Li & Thompson 1981; among others).<sup>3</sup>

Consider the following examples:

- (20) a. Wo xihuan gou. (N)
- I like dog
- ‘I like dogs.’

---

<sup>3</sup> The specificity restriction is not so absolute in Mandarin Chinese as elaborated by Lee (1986), Shi (1996) and Xu (1996). See the following examples:

- a. Zuotian yi ge ren lai zhao guo ni. (stage-level predicate)  
 Yesterday one CI person come search ASP you  
 ‘A person came to look for you yesterday.’
- b. \*Zuotian yi ge ren hen ben. (individual-level predicate)  
 Yesterday one CI person very stupid  
 ‘A person was stupid yesterday.’

They argue that only the subject in the sentence with individual predicate is subject to the specificity condition, while the subject in the sentence with stage-level predicate is immune from this restriction, esp. when the context could provide enough information to support the sentence.

- b. Wo kanjian le zhi gou. (CI-N)  
 I see LE Cl dog  
 ‘I saw a dog.’
- c. Wo kanjian le liang zhi gou. (Num-CI-N)  
 I see LE two Cl dog  
 ‘I saw two dogs.’
- d. Wo kanjian le na liang zhi gou. (Dem-Num-CI-N)  
 I see LE that two Cl dog  
 ‘I saw those two dogs.’
- e. Wo kanjian le Zhangsan. (Proper Noun)  
 I see LE Zhangsan  
 ‘I saw Zhangsan.’
- e. Wo kanjian le ta. (Pronoun)  
 I see LE him  
 ‘I saw him.’

The examples in (20) show that there is no restriction for nominal elements to function as arguments in Mandarin Chinese. Apart from being arguments, the nominals in Mandarin can act as predicates. See the following examples:

(21) a. Zhe shi laoshi. (N)

This be teacher

‘This is a teacher.’

b. Zhe shi ge laoshi. (CI-N)

This be CI teacher

‘This is a teacher.’

c. Zhe shi yi ge laoshi. (Num-CI-N)

This be one CI teacher

‘This is a teacher.’

d. ?Zhe shi na (yi) ge laoshi.<sup>4</sup> (Dem-Num-CI-N)

This be that one CI teacher

‘This is that teacher.’

e. Zhe shi Zhangsan. (Proper Noun)

This be Zhangsan

‘This is Zhangsan.’

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<sup>4</sup> The sentence is a little bit weird when a noun phrase with a demonstrative occurs in the post-copular position. It should be more felicitous to insert an adverb in the pre-copular position or add a modifier to the noun phrase. For instance:

a. Zhe jiu/cai shi na (yi) ben shu.  
This then/just be that one CI book  
‘This then is that book.’

b. Zhe shi ni yao de na yi ben shu.  
This BE you want DE that one CI book  
‘This is the book you want.’

Since the insertion of these items would affect the structure of the nominal phrase or the clause, I assume that Dem-Num-CI-N phrases cannot be an eligible predicates. The reason that definite nominals can’t be predicates awaits further investigation.

f. Zhe shi wo. (Pron)

This be I

‘This is I/me.’

From the above examples, one can observe that nearly all types of nominals can be present in the post-copular position. Though the nominal predication construction under discussion is a copular construction, one has to be careful to deal with the above sentences since the copular construction is heterogeneous in that it may be classified into two distinctive groups: predicational and equative.<sup>5</sup> The major difference between the two types of copular constructions hinges on whether or not the post-copular nominal is predicational. The post-copular nominals in the equative constructions are referential which are not property-denoting and are not legitimate to act as predicate. To rule out the equative copular construction, Zamparelli (2005) proposes two diagnostics by using a quantificational subject like *no man* or by using intensional nouns like *tragedy* as predicates which force the property denotation onto the subject (This argument is borrowed from Sio 2006). In what follows, I will use the two devices to test the predicatehood of the nominals in the copular constructions:

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<sup>5</sup> There remain distinctions with respect to the taxonomy of the copular construction. Higgins (1979) takes the initiative by classifying the copular construction into four types: identificational, specificational, identity and predicational. Higginbotham (1987) and Zaring (1996) divide the copular constructions into two types: predication and identification, and Rapoport (1987) rephrase them as predicative and equative. Sakahara’s (1996) further distinction between identification and identity makes the copular constructions three types. Here I follow Higginbotham (1987), Rapoport (1987) and Zaring (1996) and make a primary distinction between predicational and identification/equative.

- (22) a. Mougeren shi laoshi. (N)  
 Somebody be teacher  
 ‘Somebody is teacher.’
- b. Mougeren shi ge laoshi. (CI-N)  
 Somebody be CI teacher  
 ‘Somebody is a teacher.’
- c. Mougeren shi yi ge laoshi. (Num-CI-N)  
 Somebody be one CI teacher  
 ‘Somebody is a teacher.’
- d. \*Mougeren/meiren shi zhe (yi) ge laoshi. (Dem-Num-CI-N)  
 Somebody/nobody be this one CI teacher  
 ‘Somebody/nobody is this teacher.’
- e. ?Mougeren/meiren shi Zhangsan.<sup>6</sup> (Proper Noun)  
 Somebody/nobody be Zhangsan  
 ‘Somebody/nobody is Zhangsan.’
- f. \*Mougeren/meiren shi ta. (Pron)  
 Somebody/nobody be him  
 ‘Somebody is him.’

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<sup>6</sup> This sentence is marginal. One may imagine a scenario in which one knows that somebody among a crowd is named Zhangsan but does not know exactly who the person is, then (22e) is felicitous to utter. While one cannot imagine an appropriate situation to save (22d).

As shown above, all types of nominals can function as predicates except the Dem-Num-Cl-N phrase and the pronoun. Below I will use the intensional noun *beiju* ‘tragedy’ to examine whether Dem-Num-Cl-N phrase is an eligible predicate:

(23) a. Tamen de gushi shi beiju. (N)

They DE story be tragedy

‘Their stories are tragedy.’

b. Tamen de gushi shi ge beiju. (Cl-N)

They DE story be Cl tragedy

‘Their story is a tragedy.’

c. Tamen de gushi shi yi ge beiju. (Num-Cl-N)

They DE story be one Cl tragedy

‘Their story is a tragedy.’

d. \*Tamen de gushi shi zhe (yi) ge beiju. (Dem-Num-Cl-N)

They DE story be this one Cl tragedy

‘Their stories are this tragedy.’

Since neither of the diagnostics can Dem-Num-Cl-N phrases pass, it is not possible for them to be eligible predicates. The grammatical functions of different types of nominals are summarized below:

	N	CI-N	Num-CI-N	Dem-Num-CI-N	Proper Noun	Pronoun
Argument	√	√	√	√	√	√
Predicate	√	√	√	*	√	*

Though the discussion above shows that the nominals in Mandarin, except Pronouns and Dem-Num-CI-N phrases, can function as predicate, we have noticed that the grammaticality of the above sentences is dependent on the presence of the copula *shi* ‘be’. When the copula *shi* ‘be’ is absent, none of the sentences is legitimate any more:

(24) a. #Zhe/Ta      laoshi.      (N)

This/he      teacher

‘This/he is a teacher.’

b. \*Zhe/Ta      ge laoshi.      (CI-N)

This      CI      teacher

‘This/he is a teacher.’

c. \*Zhe/Ta      yi ge laoshi.      (Num-CI-N)

This/he      one      CI      teacher

‘This/he is a teacher.’



d. #Zhe/Ta      Zhangsan.<sup>7</sup>      (Proper Noun)

This/he      Zhangsan

‘This/he is Zhangsan.’

This will bring forth the question as for why the copula is needed. In the next subsection, I would like to examine the status of the copula.

### 1.3.2 The function of the copula

Among the massive discussions on the property of the copula *be*, three views are dominant: (i) *be* as a grammatical formative, in other words, a “mark of predication” (Higginbotham 1985; 1987; Bowers 1993; 1997; Sakahara 1996; Den Dikken 2006); (ii) *be* as a type-shifter (Partee 1987, among others); (iii) *be* as a packaging function applied to convert a mass state to a count eventuality (Rothstein 1999; 2001).<sup>8</sup> In what follows, I will examine these views briefly and see if they apply to nominal predication in Mandarin Chinese.

#### 1.3.2.1 The copula as a grammatical formative

To treat the copula as a grammatical formative was primarily proposed by Higginbotham (1985; 1987) and Sakahara (1996). They claim that the copula *be* in the

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<sup>7</sup> This sentence is acceptable when in contrastive context as in *Ta Zhangsan, wo Lisi* ‘he is Zhangsan, and I am Lisi.’ or when a pause or a stress is applied. But in that case, the proper noun is endowed with focus or topic import which is believed to have the capability to license the Davidsonian argument.

<sup>8</sup> Here we ignore the status of the copula in the identification construction.

predicational clause is an auxiliary verb which is semantic vacuous, assigns no theta roles and does not denote a relation. In such a case, the copula is a grammatical formative and a “mark of predication”. The obligatory application of the copula is to satisfy the inflectional requirement (as tense or number, etc.) when the lexical verb is absent in the sentence.

At first sight, this claim accounts for the obligatory presence of the copula in the predicational nominal construction in English since the copula *be* is inflected in terms of number and tense in that case. The main deficiency for this view is that it ignores the occurrence of the copula in the secondary predication where no inflection requirement is called upon as illustrated below:

(25) a. Mary saw Jane polite.

b. Mary saw Jane be polite.

(26) a. We will make Obama the President.

b. We will make Obama be the President.

In the examples above, the secondary predication “Jane polite” (25a) and “Obama the President” (26a) are legitimate which require no temporal or number inflection. In this case, one could not give a convincing explanation for the occurrence of the copula *be* in sentences (25b) and (26b), and the claim that the copula is semantic vacuous and just a grammatical formative will not hold. The same argument applies to nominal

predication in Mandarin Chinese since Chinese does not require tense or number inflection of the verb, there is no necessity to apply for the support of the copula in the nominal predication construction.

Bowers (1993; 2000) and Den Dikken's (2006) ideas are similar to Higginbotham (1985) despite of their different technical details. They also argue that the copula is a mark of predication which mediates between the subject and the predicate, though the labels given to the copula are distinct.<sup>9</sup> Be fascinating as their syntactic operations were, it is a deficit for them not clarifying the divergence between the copula and the other Pr/RELATOR elements and the conditions of the presence of the copula. Thus, giving a label for the copula is not sufficient to illustrate the function of the copula in the nominal predication construction.

### 1.3.2.2 The copula as a type-shifter

Partee's (1987) famous semantic triangle illustrates the relationship among assorted nominal constituents, namely, entities, nominal predicates and generalized quantifiers. According to her, nominals are interrelated via the operation of type-shifting. She proposes that nominal elements, i.e. entity  $e$ , nominal predicate  $\langle e, t \rangle$  and generalized quantifier phrase  $\langle \langle e, t \rangle, t \rangle$ , can be converted mutually in terms of the following rules:

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<sup>9</sup> Bowers (1993; et seq.) takes the copula as the head of the predication phrase, i.e., Pr. Den Dikken (2006) also treats the copula as a functional head mediating the subject and the predicate, but slightly different from Bowers, he labels it as RELATOR.

(27) lift:  $j \rightarrow \lambda P[P(j)]$

lower:  $\text{lower}(\text{lift}(j))=j$

ident:  $j \rightarrow \lambda x[x=j]$

iota:  $P \rightarrow \iota x[P(x)]$

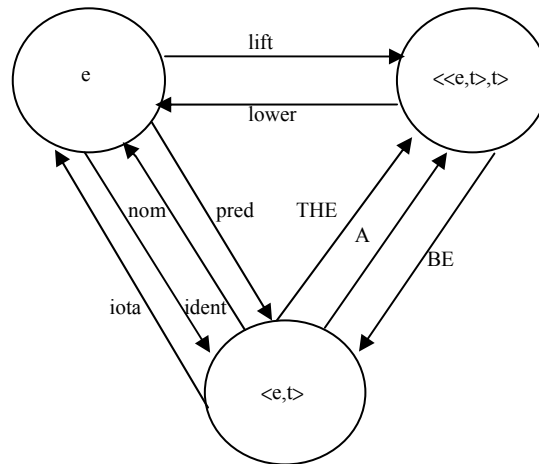
$\text{iota}(\text{ident}(j))=j$

nom:  $P \rightarrow {}^{\cap}P$  (Chierchia)

pred:  $x \rightarrow {}^U P$  (Chierchia)

$\text{pred}(\text{nom}(P))=P$

Her major points are displayed in the following diagram:



From the diagram, three operations are found to form a nominal predicate: an entity can be mapped onto a predicate by ‘pred’ and ‘ident’ operations, and a generalized quantifier phrase can be mapped onto a predicate via ‘BE’ operation. Among the three kinds of mappings, ‘ident’ is related to the identification construction and beyond the scope of our study, thus only the operations ‘pred’ and ‘BE’ are left to map the

entity/generalized quantifier phrase onto the predicate .

Following this view, we will be happy to find the obligatory presence of the copula in sentences whose predicates are numeral classifier noun phrases since these phrases can be taken as a kind of generalized quantifier phrase. The occurrence of the copula indicates the application of the BE operation, whose function is to map a generalized quantifier phrase onto a predicate. But the question arises for the sentences whose predicates are proper nouns or common nouns. The proper noun is typically treated as the entity  $e$  rather than the generalized quantifier phrase  $\langle\langle e, t \rangle, t \rangle$ , hence the ‘pred’ operation is applied to map it onto a predicate and the ‘BE’ operation is not involved here. In this case, the obligatory usage of the copula before the proper noun awaits explanation. As for common nouns, we can treat them either as the entity  $e$  or the property  $\langle e, t \rangle$  semantically. Following Chierchia (1998) and Cheng & Sybesma (1999) that common nouns in Mandarin Chinese are entities, we assume that the ‘pred’ operation is required to convert them into the predicate. Being treated in either way, i.e., as an entity or a property, the common noun will be assigned the semantic type  $\langle e, t \rangle$  before the application of the copula which will be justified by the following examples:

(28) a. Ta shi shuji jian/\*he yuanzhang.

He BE secretary and dean

‘He is the Secretary and the dean (simultaneously).’

b. Ta shi yisheng jian/\*he hushi.

He BE doctor and nurse

‘He is a doctor and a nurse (simultaneously).’

The examples above show that the two nouns can only be conjoined by the property conjunctive *jian* ‘and’ instead of the entity conjunctive *he* ‘and’, which illustrates that the two nouns conjoined are of type  $\langle e, t \rangle$  rather than  $e$ , in other words, the nouns have been mapped onto predicates before they are combined with the copula. Thus to treat the copula as a type-shifter just accounts for the obligatory occurrence of the copula before the generalized quantifier phrase and the occurrences of the copula before the proper noun and the common noun still await explanation.

### 1.3.2.3 The copula as a packaging function

The other prevalent view on the status of the copula is proposed by Rothstein (1999; 2001) when talking about the function of the copula in the adjectival predication construction, her conclusion is supposed to be applicable to the nominal and prepositional predication construction. Her major points are as follows:

(i) The predicate domain is parallel to the nominal domain in that both have the count/mass opposition;

(ii) The verbal predicate denotes the count eventuality while the adjectival/nominal/prepositional predicate denotes mass state.

(iii) The count eventuality and the mass state are convertible via appropriate semantic operations, i.e., the grinding function and the packaging function.<sup>10</sup>

(iv) The copula *be* in the adjectival predication is a packaging function which is applied to convert the mass state expressed by the adjective into count eventuality.

Borrowed from Pelletier (1979), the term ‘packaging’ is originally used in the nominal domain which refers to the mapping “from the mass domain to the count domain, i.e., mapping quantities of stuff onto count individuals made from that stuff” (Rothstein 1999:371). This can be displayed in the following example:

(29) At the cafe, they ordered three beers, two teas, and ice creams all around.

Rothstein (1999) argues that the packaging function is applicable to the predicate domain, which is operated by the copula *be*. In her view, the packaging function is “a location function which maps from the domain of M-states to the domain of located eventualities” (Rothstein 1999:372). Put it differently, the packaging function “maps an M-states onto a located eventuality which displays an instance of the M-state”

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<sup>10</sup> The grinding operation is a function mapping from individuals to the stuff which they are composed of, i.e., a function from the count domain to the mass domain. For details, please see Pelletier (1979) and Rothstein (1999).

(ditto). The copula *be* denotes the relation INST (for ‘instantiate’), which is expressed in the following logical formulae:

(30)  $INST = \lambda S \lambda e. \exists s \in S: e = l(s)$ , where ‘*l*’ be the locating function, ‘*S*’ a variable of type  $\langle s, t \rangle$ , ‘*s*’ a state and ‘*e*’ an eventuality.

Here the domain of *l* is the set of M-states and its range is the set of events, i.e.,  $l: S \rightarrow E$ . That is to say, *l*(*s*) is not *s* location but a located eventuality in *E*. In other words, the application of *be* is to introduce an event argument and combines it with a lexical predicate, e.g., an adjective, which expresses a property of that eventuality.

We would admit that Rothstein’s idea is insightful in that it successfully explains the contrast of the following sentences:

- (31) a. Mary saw Jane polite.  
b. Mary saw Jane be polite.

According to her, the secondary predicate in (31a) denotes a mass state but that in (31b) denotes a count eventuality by virtue of the application of the packaging function. This claim is justified by various tests as adding counting adverbials, temporal locatives, adverbial modification by event quantifiers and distributivity. The trick of her argument is that her claim is based on secondary adjectival predication but she extends it to primary predication as well. Actually, primary adjectival predication behaves quite differently from secondary predication. Take the following examples:



(32) a. Mary saw Jane be polite twice.

b. \*Mary is polite twice.

In (32a), the counting adverbial *twice* can be used to modify both the matrix verb *saw* and the embedded predicate *be polite*, which seems to be strong evidence supporting the claim that the adjectival predicate in secondary predication is converted to a count eventuality by the application of the copula *be*. If such is the case, we might expect that the same will be applied to primary adjectival predication which could be converted to a count eventuality when the copula is inserted. But from (32b), one could observe that the counting adverbial cannot be used to modify the predicate despite the usage of the copula. Thus, the claim that the copula is a packaging function is falsified.

In what follows, I will introduce the neo-Davidsonian event theory and see if the function of the copula can be accounted for from this perspective.

## **1.4 The visibility of the Davidsonian argument**

### 1.4.1 Neo-Davidsonian theory & the Davidsonian argument visibility hypothesis

Higginbotham (1985; 2000), Parsons (1990; 2000) and Chierchia (1995) extend Davidson's event theory to all the verbs, including action verbs and stative verbs. They argue that every verb has an implicit argument which is instantiated as an event

argument in stage-level predicate and a state argument in individual-level predicate.<sup>11</sup>

And they believe that this claim applies to predicate nominals as well. Let us take

Chierchia (1995 : 204) for example:

...every VP, whatever its internal structure and aspectual characteristics, has an extra argument position for eventualities, in the spirit of Davidson's proposal. It is through the Davidsonian argument that temporal and adverbial modification is realized. That is to say, adverbs and tenses are construed as properties of eventualities. In a way, having this extra argument slot is part of what makes something a VP, whatever its inner structure. Predicate NPs, I would like to maintain, are no exception to this.<sup>12</sup>

In line with this, I assume that all the predicates, including s-level predicates and i-level predicates, may be decomposed into two parts: a lexical predicate and an eventuality predicate, which amounts to saying that the predicate is the composite of a

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<sup>11</sup> Divergence remains concerning the existence of event argument in different types of predicates after the distinction between the stage-level predicate and individual-level predicate was made by Carlson (1977). The difference between the two dominant views represented by Kratzer (1995) - Diesing (1992) and Chierchia (1995) lies in that whether the Davidsonian argument exists in both types of predicates: The Kratzer-Diesing Hypothesis argues that only the stage-level predicate has a Davidsonian argument and the individual-level predicate does not; Higginbotham (1985; 2000), Parsons (1990; 2000) Chierchia (1995) and Rothstein (1999; 2001) claim that every verb has a Davidsonian argument, this approach is generally taken as the neo-Davidsonian event theory. Here, I would follow the neo-Davidsonian approach and ignore the differences between the two views.

<sup>12</sup> Chierchia (1995) also distinguishes the stage-level and the individual-level predicate in terms of the different operators binding the Davidsonian argument. He claims that the Davidsonian argument of the stage-level predicate is closed off by an existential operator while the Davidsonian argument in the individual-level predicate is bound by a generic operator *Gen*. By doing so, Chierchia not only maintains the spirit of the Davidsonian theory but also specifies the difference between the stage-level predicate and the individual-level predicate.

lexical predicate and an eventuality one.<sup>13</sup> The lexical predicate is predicated of the entities and the eventuality predicate is applied to the Davidsonian argument. In such a case, VPs with a lexical argument slot are lexical predicates only, and eligible predicates should be VPs with a Davidsonian argument slot. In other words, the lexical predicate denotes the property of the entity and the eventuality predicate is to denote the property of the proposition. Clearly, the lexical predicate has no direct connection with the proposition. Suppose that lexical verbs, adjectives and nouns are lexical predicates, an eventuality predicate is required to accommodate the Davidsonian argument and bridge the gap between the lexical predicate and the proposition. In other words, by introducing/accommodating a Davidsonian argument, the eventuality predicate converts a property into a propositional function in the sense of Chierchia (1985).

The above discussion shows that the crucial difference between the lexical predicate and the eventuality predicate is whether they accommodate a Davidsonian argument which is crucial for a well-formed sentence. Along this line, I propose that the Davidsonian argument has to be visible for a well-formed sentence, hence the Davidsonian argument visibility hypothesis:

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<sup>13</sup> The term ‘eventuality’ here and throughout is used to encompass both events and states (Bach 1986).

### (33) Davidsonian argument visibility hypothesis

The Davidsonian argument has to be visible for a well-formed sentence.

#### 1.4.2 The copula as an eventuality predicate

Based on the Davidsonian argument visibility hypothesis, a Davidsonian argument is required to be visible for a well-formed sentence. As proposed in the last subsection, the Davidsonian argument is accommodated by an eventuality predicate. Then the question arises as for what is the eventuality predicate in the nominal predication construction.

Given that the eventuality predicate denotes the eventuality type a lexical predicate intends to convey, which can be instantiated as BE, DO, BECOME etc. depending on whether the eventuality is a state, activity or inchoativity. Different from the lexical predicate which expresses the specific reading of the lexical root, the eventuality predicate is an abstract predicate indicating the eventuality type of the verbal predicate. Since the copula *shi* 'be' is always related to the stative predicate, it is reasonable to treat it as an instantiation of a stative predicate BE. This assumption is in conformity with the previous proposal held by Huang (1997), Lin (2001) and Tang (2005b).

If the assumption that the copula *shi* 'be' is the eventuality predicate of nominal predication is on the right track, then it comes naturally that it occurs in the nominal

predication most of the time. Besides, the obligatory occurrence of the copula with the predicate nominals can be accounted for considering that its occurrence is to provide a position to accommodate the extra event argument which the nominal predicate does not possess inherently. In such a case, the occurrence of the copula is explained in a unified way.

#### 1.4.3 Nominal predication under discussion is a reduced copular construction

I follow the claim proposed by Wang (1946), Gao (1948), Zhang (1953) and Shi (2002; 2003) that the nominal predication construction is a reduced copular construction with the copula omitted in some special contexts. This claim is mainly based on the following two pieces of evidence:

- (i) The copula *shi* 'be' can be recovered in all the nominal predication constructions without affecting the meaning of the sentence:

(34) Jintian (shi) Fuhuojie.

Today be Easter

'Today is Easter.'

(35) Wo (shi) Shandong ren.

I be Shandong person

'I'm from Shandong.'

(ii) The copula *shi* ‘be’ is obligatory in the negative sentences:

(36) Jintian bu \*(shi) Fuhuojie.

Today not be Easter

‘Today is not Easter.’

(37) Wo bu \*(shi) Shandong ren.

I not be Shandong person

‘I’m not from Shandong.’

Since Stowell (1981; 1983), there is a consensus (cf. Rapport 1987; Heggie 1988; Rothstein 2001; Den Dikken 2006) that the copular construction is a raising construction where the copula acts as a raising verb which takes a clausal complement as schematized below:

(38) ...be [subject predicate]

The subject of clausal complement acquires theta-role from the embedded predicate but it cannot get nominative case from the embedded predicate, in this case subject-to-subject raising occurs for case reason. See the following derivation:

(39) subject<sub>i</sub> be [<sub>sc</sub> t<sub>i</sub> predicate]

Following Stowell (1981; 1983), not only the lexical phrases like NP, VP, AP or PP are qualified predicates but the functional phrases as IP and CP are eligible predicates.

In line with this, I claim the nominal predication construction is a raising construction

as well. The only distinction from its English counterpart is that the copula is not realized phonologically. It should have the parallel syntactic structure with the English copula construction:

(40) NP<sub>1i</sub> (*shi*) [<sub>NP2</sub> t<sub>i</sub>[NP<sub>2</sub>]]

#### 1.4.4 The visibility of the Davidsonian argument: the possibilities

According to the Davidsonian argument visibility hypothesis, the Davidsonian argument has to be visible for a well-formed sentence. While the question arises as for how to make it visible since the Davidsonian argument is most of the time an empty category and has no phonological realization.<sup>14</sup> In what follows, I would like to briefly discuss the alternatives to identify the Davidsonian argument, and the details will be left in the remaining chapters.

Before discussing the identification of the Davidsonian argument, I would like to restate Davidson's claim that the Davidsonian argument is like an entity/individual and is a sort of thing. If such is the case, then the devices to identify the null argument/entity might apply to the identification of the silent Davidsonian argument.

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<sup>14</sup> Under the E-position hypothesis, Higginbotham (2000) has proved the visibility of E via the theory of event nominalizations, including gerunds, derived nominals, and generic events. According to him, the event nominalizations "that refer to or quantify over events are those that pick out the E-position to be bound by the determiner" (Higginbotham 2000:51). Take 'a rising of the sun' for example, it can be interpreted as an indefinite description like "an *e* such that rise (the sun, *e*)". This is comparable to the Mandarin counterpart like *zhe ben shu de chuban* 'the publication of this book' which could be treated as a definite interpretation of an event 'the *e* such that publish (the book, *e*)'. Sometimes, the event classifier *ge* in Mandarin Chinese is also a device to pick out the event argument (Wu 2002; Huang 2005; Zhang 2009). While we admit that the Davidsonian argument is invisible most of the time, especially in simple sentences (Higginbotham 2000).

As proposed by Higginbotham (1985; 2000) and Kratzer (1989) that the Davidsonian argument can be taken as an event variable which has to be bound by some operator as the individual variable does. According to them, the Davidsonian argument is to be satisfied at the inflectional node I/T and be existentially closed as a consequence.<sup>15</sup> Then the most convenient device to identify the Davidsonian argument is through the thematic binding, that is to say, the Davidsonian argument can be realized once it is thematically bound by I/T.

The other alternative to realize the Davidsonian argument is by the spelt-out of the eventuality predicate, i.e., the copula *shi* ‘be’. In accounting for the kind reference, Carlson (1977/1980) has claimed that a generic object or kind can be identified with the property of being an object of that kind as illustrated by the example of the kind dinosaur below:

(41)  $x^{\wedge}\text{dinosaur}(x)$ <sup>16</sup>

Following Chierchia (1995) that there is a generic operator binding the individual predicate, then the eventuality expressed by the predicate nominal will be regarded as a generic eventuality. Recall that the Davidsonian argument is predicated of by the eventuality predicate and could be taken as its object. In such a case, we would expect that Carlson’s (1977/1980) treatment to kind reference applies to the generic

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<sup>15</sup> Following Chierchia (1995) that the operator occurring in individual-level predicates is generic, the Davidsonian argument in nominal predication should be closed generically/universally.

<sup>16</sup> Note that the symbol ‘ $\wedge$ ’ is not the superscript of ‘x’, it should be typed right above ‘x’. It is used here for kind reference. This account applies to the annotation in (42).



eventuality, to be specific, the articulation of the eventuality predicate will imply the existence of the Davidsonian argument. For example:

(42) a. John is a student.

b.  $d^{\wedge}$  student (john, d)

Besides the light verb, there are also adverbials functioning as eventuality predicates semantically. When Davidson (1967) first put forward the event argument theory, he took the adverbials like instruments, locatives and adverbs modifying verbs to prove the existence of the event argument in the action verb. He thought that the adverbials listed above are event predicates whose arguments are events rather than entities. Though the adverbials like instruments and manner adverbs do not apply to nominal predication, the occurrence of the Davidsonian argument modifier is possible to be observed. In such a case, the identification of the Davidsonian argument is expected as a consequence of the articulation of the Davidsonian argument modifier.

Apart from the inflectional node I/T and the eventuality predicate, the reference of the Davidsonian argument could also help to identify the argument. Kratzer (1989) has claimed that the Davidsonian argument may be instantiated as the spatio-temporal argument. Though I do not agree with her that the spatio-temporal argument is equivalent to the Davidsonian argument, I have to admit that the spatio-temporal argument can specify the location of the Davidsonian argument and can thus be taken

as a part of the Davidsonian argument if the spatial/temporal feature is the inherent feature of the Davidsonian argument. To some extent, the spatio-temporal argument is the reference of the Davidsonian argument. In such a case, the clear indication of the location of Davidsonian argument will be another efficient way to spell out the Davidsonian argument.

If the Davidsonian argument is analogous to entities as proposed by Davidson (1967), then there will be possibilities that the silent Davidsonian argument could be antecedent-governed or controlled like the empty category *pro* or PRO. All of the suggestions above will be discussed at length in the following chapters.

## **1.5 The syntactic configuration of nominal predication**

### 1.5.1 The studies on the syntactic representation of the Davidsonian argument

Following the Davidsonian event theory, especially the neo-Davidsonian approach, the Davidsonian argument is identified as a primitive in the logical semantics of a sentence (Davidson 1967; Higginbotham 1985; 2000; Parsons 1990; 2000; Chierchia 1995, to name a few only). But it remains controversial whether the Davidsonian argument has to be encoded syntactically. Among the numerous proposals which advocate adding the Davidsonian argument to the syntactic representation, two theories are worth mentioning which differ in not only the verb types possessing the

Davidsonian argument but also how the argument is syntactically satisfied.

As discussed above, Higginbotham (1995; 2000) claims that both event-denoting and non-event denoting verbs have an E-position ranging over eventualities, i.e., a Davidsonian argument. The E-position is similar to the thematic arguments and should be included in the argument array and satisfied syntactically as a consequence of the  $\theta$ -Criterion. He suggests that the E-position is satisfied via thematic binding to I/T, in other words, the E-position is bound by the inflectional node I/T in the same way as the nominal referential argument being bound by the inflectional node D. The E-position is equivalent to an eventuality variable and the node I/T existentially closes it. The following example illustrates the mechanism of argument satisfaction (Higginbotham 1985:554-556):

- (43) a. John saw Mary.  
b. see, +V, -N, <1, 2, E>  
c.  $(\exists e)$  see (John, Mary, e)

In the example above, the thematic arguments of the verb *see* are annotated by the numbers in the brackets and the Davidsonian argument in the logical semantics is represented by E. Like the thematic arguments, it is shown that the Davidsonian argument is also an argument of the verb *see*. Slightly different from the thematic arguments, it has to be existentially closed by the inflectional node I.

Though Higginbotham's (1985; 2000) proposal incorporates the Davidsonian argument into the syntactic representation which has to be discharged at I/T, he does not indicate clearly where the Davidsonian argument should be syntactically located.

Like Higginbotham (1985; 2000), Kratzer (1989) also suggests that the Davidsonian argument be instantiated syntactically and be satisfied by Tense. While Kratzer's (1989) treatment is distinctive from Higginbotham (1985; 2000) in two points: Firstly, the Davidsonian argument is taken as a thematic role for spatio-temporal location rather than the event itself. In such a case, not all verbs but stage-level predicates possess the Davidsonian argument in their argument structures. Secondly, the Davidsonian argument is taken as the external argument of the structure and the subject of stage-level predicates is base-generated VP internally.

### 1.5.2 The syntactic structure of nominal predication

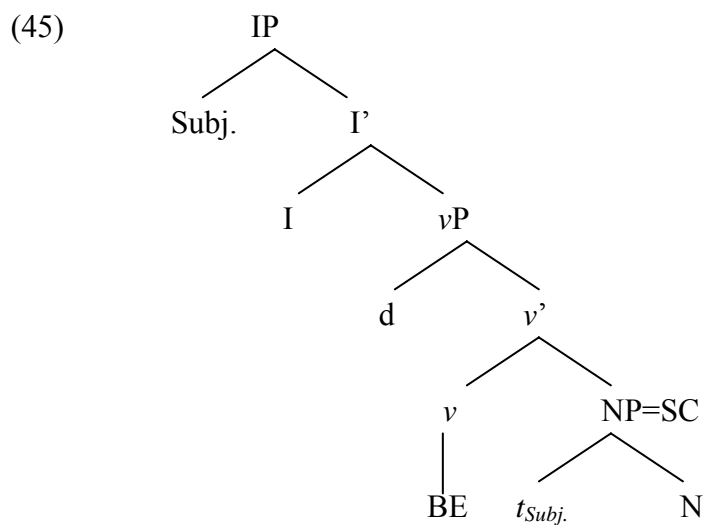
Based on the above discussions, I have the following assumptions on the syntactic structure of nominal predication that the nominal predication construction is a reduced copular sentence where the copula selects a small clause (Stowell 1981). The small clause is composed of the subject and the lexical predicate underlyingly, the copula as the eventuality predicate is instantiated as the head of *v*P accommodating the Davidsonian argument at its specifier and converting the lexical predicate into an eventuality predicate. If such is the case, the Davidsonian argument in the structure

should be treated as the external argument. As for the subject of the nominal predicate, I assume that it should be located internal to NP based on the Argument Linking principle proposed by Williams (1981), in other words, it is base-generated at the specifier of NP and will ultimately move to SpecIP to satisfy the EPP requirement.<sup>19</sup>

(44) Argument Linking (Williams 1981)

In D-structure, all arguments except the external argument are realized within the maximal projection of their predicates.

The syntactic structure of nominal predication is represented as follows:<sup>20</sup>



## 1.6 The outline

This thesis intends to give a unified account to nominal predication in Mandarin Chinese from the perspective of Davidsonian event theory. By examining the nominal

<sup>19</sup> Another speculation for the subject movement could be that the raising verb is similar to an accusative verb which has no subject underlyingly, and the subject movement is required obligatorily for case reason.

<sup>20</sup> Here and throughout, the letter 'd' is used to refer to the Davidsonian argument.

predication construction in Mandarin Chinese, I would like to explore whether nominal predication in Mandarin Chinese is distinctive from the other types of predication, including verbal predication in Mandarin Chinese and predication in the inflectional languages. If nominal predication is supposed to behave the same with the other types of predication, then what common traits they share and in what way nominal predication is distinctive from the other predicative constructions.

In Chapter 1, I present the theoretical framework adopted in this study, the hypothesis to be justified in the remaining chapters, a general picture of the nominal predication construction and my basic assumptions on the syntactic structure of nominal predication in Mandarin Chinese.

Chapter 2 will mainly discuss the nominal predication construction formed by two temporal/locative nominals where the Davidsonian argument is realized via the spelt-out of the spatio-temporal argument.

Chapter 3 deals with the nominal predication construction whose predicate is the modified nominal phrase. The Davidsonian argument of this type of construction is articulated via event modification.

Chapter 4 discusses the nominal predication constructions whose predicates are possessive nominal phrases. Different from the two types of constructions above, the Davidsonian argument of the predicative possessive nominal predication construction

is realized via the interaction between the temporal argument of the predicative possessive phrase and that of the matrix clause.

Chapter 5 elaborates the implications of this study and Chapter 6 is the conclusion of the study.

## CHAPTER 2 TEMPORALS/LOCATIVES AND NOMINAL PREDICATION

### 2.1 Introduction

In Chapter 1, I have assumed that every predicate possesses a Davidsonian argument which has to be visible to generate a well-formed sentence. Various possibilities are discussed to spell out the Davidsonian argument, including the existential closure by the Inflection node and the articulation of the eventuality predicate. Since the nominal predication construction is regarded as a reduced copular construction, the eventuality predicate is not present phonologically. In such a case, other possibilities to satisfy the visibility requirement of the Davidsonian argument will be explored. In this chapter, I would like to justify this proposal by examining the nominal predication construction with temporals/locatives. The following issues are to be discussed:

- (i) The restrictions on the bare nominals;
- (ii) The function of the clause-initial temporals/locatives;
- (iii) The structure of the nominal predication construction with temporals/locatives.

### 2.2 Predicate nominals in the copulaless nominal predicate construction

Though the discussion in subsection 1.3.1 shows that all types of nominals, except



Prons and Dem-Num-Cl-N phrases, can function as predicates, it is noticed that the grammaticality of the above sentences is dependent on the presence of the copula *shi* ‘be’. When the copula *shi* ‘be’ is absent, none of the sentences is legitimate any more.

The sentences are repeated here for convenience:

(1) a. \*Zhe/Ta      laoshi.      (N)

This/he      teacher

‘This/he is a teacher.’

b. \*Zhe/Ta      ge laoshi.      (Cl-N)

This      Cl      teacher

‘This/he is a teacher.’

c. \*Zhe/Ta      yi ge laoshi.      (Num-Cl-N)

This/he      one      Cl      teacher

‘This/he is a teacher.’

d. \*Zhe/Ta      Zhangsan.      (Proper Noun)

This/he      Zhangsan

‘This/he is Zhangsan.’

As discussed in Chapter 1, predicate nominals occurring in the copulaless nominal predication constructions are restricted to the following types:

(i) temporal expressions;

(ii) modified noun phrases;

(iii) *de* phrases.

In what follows, I would like to examine the relationship between temporals/locatives and nominal predication.

### **2.3 Temporal/locative nominal predicate**

Time and space are no doubt two crucial notions for the language-user to interpret the language information in communication. This is demonstrated in semantics that the truth value of every proposition is determined if and only if the proposition is placed in a possible world which is instantiated as a world-time pair. It is due to the significance of the two notions that the spatio-temporal argument is sometimes used interchangeably with the Davidsonian argument in the Davidsonian event theory (Kratzer 1995; among others) though time and space are just two prominent features of the Davidsonian argument. Syntactically, the grammatical temporal/aspect systems are developed in inflectional languages in order to encode the temporal reading conveniently. Though Chinese lacks the inflectional temporal/spatial system, it has abundant devices, like temporal/aspect particles, time/locative nouns, adverbs and predicates, to indicate the time/space of the language. In what follows, the discussion will be centered on the temporal/locative predicates appeared in the nominal predication construction.

As stated by Zhu (1982), among many other traditional grammarians, temporal nominals expressing dates and festivals can act as predicates in the copulaless nominal predication construction:

(2) a. Jintian xingqiyi.

Today Monday

‘Today is Monday.’

b. Mingtian shengdanjie.

Tomorrow Christmas

‘Tomorrow is Christmas.’

Besides temporals, Ma (1991) and Lu (2003) indicate that locatives are capable of being predicates in the copulaless predicational construction as well. They point out that the name of the station can be used freely as a nominal predicate. See the example from Lu (2003) below:

(3) Xia yi zhan Ji’nan.<sup>23</sup>

Next one station Ji’nan

‘The next station is Ji’nan.’

In addition, it is noticed that predicative locatives are not limited to the name of the station:

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<sup>23</sup> ‘Ji’nan’ is the capital of Shandong Province. Here it is used as the name of a station.

(4) a. Qianbian Jianshazui.<sup>24</sup>

Front Tsimshatsui

‘The front is Tsimshatsui.’

b. Zheli shidao.

Here esophagus

‘Here is esophagus.’

c. Na’er Hongkan.<sup>25</sup>

There Hung Hom

‘There is Hung Hom.’

## 2.4 Restrictions on the predicative temporal/locative nominals

As is observed by Ma (1991), not all temporals or locatives can occur in the nominal predicational construction:

(5) a. Jintian xingqiyi.

Today Monday

‘Today is Monday.’

---

<sup>24</sup> ‘Jianshazui’ is a place in Kowloon, Hong Kong. Of course, it can be used as the name of a metro station, but in that case, a nominal *zhan* ‘station’ is preferred to be added after the name of the place. For example:

(i) Qianbian Jianshazui zhan.  
Front Tsimshatsui station

<sup>25</sup> ‘Hongkan’ is also a place in Kowloon, Hong Kong. Like ‘Jianshazui’, it is also the name of a railway station. As is the case in Note 24, a nominal *zhan* ‘station’ is required when it refers to the station.

b. \*Xingqiyi jintian.

Monday today

Intended meaning: 'Monday is today.'

(6) a. Zheli tushuguan.

Here library

'Here is the library.'

b. \*Tushuguan zheli.

Library here

Intended meaning: 'The library is here.'

In what follows, the restrictions imposed on the temporal/locative nominals will be examined.

#### 2.4.1 Restriction on the relative temporal/locative nominals predicate

##### 2.4.1.1 Two types of temporals

Ma (1991) distinguishes two types of temporal nouns:

- (i) Relative temporal nouns: relative temporal nouns refer to nominals like 'today, ancient time, past', the denotation of which varies in terms of the speech time of the speaker, that is to say, their denotations are speaker-centered and determined by the speech time. Take 'today' and 'yesterday' for example, they may refer to

any day depending on the speech time. If the speaker spoke on September 9, then September 9 is 'today'; but if the speaker spoke on September 10, then September 9 becomes 'yesterday', so on and so forth. To sum up, the denotations of relative temporals are context-dependent and thus deictic.

- (ii) Absolute temporal nouns: absolute temporal nouns refer to nominals like 'September 9, the National Day, Monday', whose denotations are independent of change of speech time. Temporals of this kind include date, week or festival, etc. For instance, the date of Sept. 9, 2009 will be September 9, 2009 all the time irrespective of whether the speech time is September 9 or September 10. Clearly, the denotations of absolute nominals are context-independent and will not be affected by the speech time.

Another point worth noting is that some absolute temporal nominals may occur cyclically. For example, 'Monday' will occur repeatedly on the first day of a week.

Per contra, relative temporals will never occur recursively. Once the speech time is set, we cannot expect the repeated occurrence of relative temporals.

#### 2.4.1.2 Restrictions on relative temporal/locative predicative nominals

As indicated by Ma (1991), not all temporal nouns have the ability to be predicates.

He claims that only absolute temporal nouns are eligible as predicates in the copulaless construction. For instance:

(7) a. \*Xingqiyi Jintian.

Monday today

‘Monday is today.’

b. \*Shengdanjie Mingtian.

Christmas tomorrow

‘Christmas is tomorrow.’

I observe that the same constraints are imposed upon the locative predicates in the copulaless nominal predicational construction, i.e., the locatives whose denotations are context-dependent are not legitimate predicates as illustrated below:

(8) a. \*Ji’nan xia yi zhan.

Ji’nan next one station

‘Ji’nan is the next station.’

b. \*Jianshazui Qianbian.

Tsimshatsui front

‘Tsimshatsui is in the front.’

c. \*Shidao zheli.

Esophagus here

‘Esophagus is here.’

d. \*Hongkan na'er.

Hunghom there

‘Hunghom is there.’

The observation above can be summarized as follows:

Restriction I: Relative temporal/locative nominals are not allowed to be predicates.

#### 2.4.2 Restriction on the clause initial nominals

Aside from the asymmetry between relative temporal/locative nominals and absolute temporal/locative nominals, I also observe that relative temporal/locative nominals are different from other determiner noun phrases with respect to their abilities of being predicates. See the examples below:

(9) a. Jintian xingqiyi.

Today Monday

‘Today is Monday.’

b. \*Zhe yi tian xingqiyi.

This one day Monday

‘This day is Monday.’

(10) a. Zheli Hongkan.

Here Hung Hom

‘Here is Hung Hom.’



b. \*Zhe ge difang Hongkan.

This Cl place Hung Hom

‘This place is Hung Hom.’

It is evident that only relative temporal/locative nominals can appear in the clause initial position while the real determiner nominal phrase as *zhe yi tian* ‘this day’ or *zhe ge difang* ‘this place’ are not allowed to appear in the sentence initial position. In line with this, the restriction may be generalized as below:

Restriction II: Determiner noun phrases are not allowed to appear in the clause initial position.

## 2.5 The analysis on the restrictions

The above observations show that (i) only absolute temporals/locatives can be predicates while relative temporals/locatives cannot; and (ii) relative temporals/locatives are distinctive from real determiner phrases in that determiner phrases can not occur in the clause initial position. Then the questions arise: (i) why are relative temporal/locative nominals not capable of being predicates? What is the difference between absolute temporal/locative nominals and relative temporal/locative nominals?; (ii) What is the function of relative temporal/locative nominals?

### 2.5.1 Against Ma (1991)

To solve the problem that relative temporals/locatives are incapable of being predicates, Ma (1991) claims that absolute temporals/locatives have innate sequential meaning but relative ones do not. According to him, it is the sequential meaning that determines the grammaticality of a sentence. While this claim is suspicious in that not all temporal/locative predicates are endowed with a sequential meaning like the sentences below:

(11) a. Jintian guoqing\_\_\_\_\_jie .

Today National Day festival

‘Today is National Day.’

b. Mingtian duanwu.

Tomorrow Dragon Boat Festival

‘Tomorrow is Dragon Boat Festival.’

Different from temporals that express date and week, the temporal nominals above have no numerals indicating the sequence of the day, which suggests that the sentence is not to specify the sequence of the date. Actually, what the above temporal nominals are concerned are the intension of the festival rather than the sequence of the date. The claim that sequential meaning is crucial for the grammaticality of nominal predication does not hold for locative nominals, either:

(12) a. Qianbian Wangjiao.<sup>26</sup>

Front Mongkok

‘The front is Mongkok.’

b. Zheli xinzang.

Here heart

‘Here is the heart.’

For the festivals listed above, one would argue that they possess an implicit sequential meaning, while it is strange to claim that the sequential meaning is inherent in the locatives as *xinzang* ‘heart’ or *Wangjiao* ‘Mongkok’.

### 2.5.2 The distinction between absolute and relative temporals/locatives

It is assumed that the asymmetry between relative and absolute temporals/locatives in being predicates is resulted from their distinctive syntactic structures. This could be illustrated from the examples below:

(13) a. zhe ge shengdanjie (absolute temporals)

this Cl Christmas

‘this Christmas’

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<sup>26</sup> ‘Wangjiao’ is a place in Hong Kong.

b. na ge xingqiyi

that Cl Monday

‘that Monday’

(14) a. \*zhe ge jintian<sup>27</sup> (relative temporal)

this Cl today

‘this today’

b. \*na ge qianbian (relative locative)

that Cl front

‘that front’

The above examples show that absolute temporal/locative nominals can co-occur with the functional elements as determiners, numerals or classifiers and are always to the right of them while relative temporals/locatives cannot co-occur with determiners and cannot appear to the right of them. This suggests that absolute temporal/locative nominals and relative temporals/locatives have different syntactic structures: absolute temporal/locative nominals are NPs; while relative temporal/locatives are functional phrases themselves, probably DPs considering they cannot co-occur with demonstratives. The distinctive syntactic structures of the two types of nominals would to some extent account for their divergence in the capability of being predicates: absolute temporal/locative nominals are lexical predicates while relative

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<sup>27</sup> The same is observed in Tang (2002b).

temporals/locatives are not. Absolute temporals/locatives as NPs should be property-denoting constituents and thus possess an open individual variable semantically. Relative temporals/locatives, being DPs, their individual variables are expected to be closed off by the Specific Operator located at SpecDP (Campbell 1996, among others). The distinction between absolute and relative temporals/locatives can be generalized as follows:

(15) The individual variable of the absolute temporal/locative is open while that of the relative one is closed off.

By having an open individual variable, it amounts to saying that the absolute temporal/locative has an individual slot, i.e., it is a lexical predicate. While the relative temporal/locative would not be a lexical predicate given that the individual variable has been closed off. Besides the individual slot, it is assumed that a Davidsonian Argument is required to become an eligible predicate as discussed in Chapter 1. The following example illustrates that absolute temporals do have a built-in Davidsonian argument:

(16) Guoqing jie shi qingzhu guojia jianli de rizi.

National Day BE celebrate nation founding DE day

‘National Day is a day to celebrate the founding of a nation.’

If such is the case, it is not surprising that absolute temporals can be eligible

predicates. To generate a grammatical sentence, the remaining issue is to spell out the Davidsonian argument, i.e., to make it visible in one way or another.

### 2.5.3 The status of the clause initial temporal/locative nominals

In accounting for the asymmetry between relative and absolute temporal/locative nominals, Tang (2002b) gives a pragmatic construal: relative temporals/locatives are definite NPs and absolute temporals/locatives are indefinite NPs, relative temporals/locatives should precede absolute temporals/locatives since definite NPs denote the given information and indefinite NPs the new information. But clearly, relative temporals/locatives do not behave the same as the other determiner phrases: the real determiner phrases like *zhe yi tian* ‘this day’ are not allowed to occur at the clause initial position though they also denote the given information. This brings forth the second question: Why are relative temporal/locative nominals different from the other determiner phrases?

To answer this question, I propose that the relative temporal/locative situated at the clause initial position is not the subject of the construction. This claim is due to the following three reasons: Firstly, the determiner phrases which are the best candidates of the subject are not allowed to appear in this position. Secondly, Chinese is a language which allows *pro*-drop, that is to say, we have good reasons to assume that the subject of this kind of nominal predicative construction is an expletive or an

empty *pro*. Thirdly, the adnominal/adverbial modifiers in Mandarin Chinese always precede the modified heads as stated by Huang (1982) and Li (1990). This claim is hardly surprising considering the English counterpart of this type of sentence:

(17) It is Monday today.<sup>28</sup>

Like *today* in the English counterpart, I assume that *jintian* ‘today’ in *jintian xingqiyi* ‘it is Monday today’ is adjunct rather than subject. The difference between the Chinese nominal predication construction and its English counterpart lies in that the adjunct stays in-situ in English while it tends to be in the adnominal/adverbial position in Chinese. Up to now, the structure of *jintian xingqiyi* ‘it is Monday today’ can be roughly displayed as follows:

(18) [expletive subject [<sub>adjunct</sub> jintian [<sub>NP</sub> xingqiyi]]]

This is applicable to verbal predication in Mandarin Chinese. When the subject of a verbal predication construction is expletive or an empty *pro*, the relative temporal/locative can occur in the clause initial position. For instance:

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<sup>28</sup> The sentence (a) ‘It is Monday today.’ has a variant (b) ‘Today is Monday.’ I assume that the two sentences are the same in nature where ‘today’ in both sentences is an adjunct rather than a subject. This claim is supported by the following facts that ‘today’ (i) tends to remain in the adjunct position when the predicate ‘Monday’ in (b) is questioned, for example, ‘What day (of the week) is it today?’ or (ii) can be dropped as in ‘What day (of the week) is it?’. Besides, adjunct-fronting is not uncommon to observe in English as in ‘On the table is a book./In the room are two students.’

(19) a. (expletive) zuotian xia le yi chang yu.

∅ yesterday fall LE one CL rain

‘It rained yesterday.’

b. expletive qianmian lai le yi ge ren.

∅ front come LE one CL person

‘There comes a person in the front.’

c. *pro* jintian wanshang kai hui.

*pro* today evening have meeting

‘We’ll have a meeting this evening.’

It is evident that the subjects of the above sentences are either an expletive or an empty *pro* which could be recovered. In such a case, it is not reasonable to treat the clause initial temporal/locative as a subject. The following examples will give more evidence to the claim that the clause initial temporals/locatives are adjuncts rather than subjects:

(20) a. Jintian shengdanjie.

Today Christmas

‘It is Christmas today.’



b. Shenmeshihou/\*shenme rizi shengdanjie?<sup>29</sup>

When/what day Christmas

‘<sup>ok</sup>When is Christmas/\*what day is (it) Christmas?’

c. Jintian \*shenmeshihou/<sup>ok</sup>shenme rizi?

Today when

‘\*When is today/<sup>ok</sup>what day is it today?’

(21) a. Zheli hongkan.

Here Hung Hom

‘Here is Hung Hom.’

b. Nali/\*shenme difang hongkan?

Where/what place Hung Hom

‘<sup>ok</sup>Where/\*what place is Hung Hom?’

c. Zheli \*nali/<sup>ok</sup>shenme difang?

Here \*where/<sup>ok</sup>what place

‘\*Where is here/<sup>ok</sup>what place is it here?’

*Shenmeshihou* ‘when’ and *nali* ‘where’ in Mandarin Chinese are question words used

to ask time and place and are traditionally considered as interrogative adverbs (Zhu

1982), whereas *shenme rizi* ‘what day’ and *shenme difang* ‘what place’ are

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<sup>29</sup> Besides *shenmeshihou* ‘when’ and *shenme rizi* ‘what day’, *na (yi) tian* ‘which day’ can be used as the interrogative phrase. But the answer to the question *na (yi) tian shengdanjie?* ‘which day is Christmas’ could be either (i) *jintian shengdanjie*. ‘today is Christmas’ or (ii) *zhe yi tian shi shengdanjie*. ‘this day is Christmas.’ To avoid ambiguity, I ignore this interrogative phrase.

property-questioning constituents used to ask nominals irrespective of whether the nominal functions as an argument or a predicate. As observed above, the interrogative adverbs questioning time and place *shenmeshihou* ‘when’ and *nali* ‘where’ are only allowed to ask the clause initial nominals, on the contrary, the property-questioning *shenme rizi* ‘what day’ and *shenme difang* ‘what place’ are only allowed to question the second nominals of the above sentences. The distinctive manifestations of these two types of interrogative phrases suggest that *shenmeshihou* ‘when’ and *nali* ‘where’ are the same with the clause initial nominals in categorical status while *shenme rizi* ‘what day’ and *shenme difang* ‘what place’ are of the same status with the second nominals, in other words, the clause initial nominal are adjuncts rather than subjects and the second nominals are predicates.

But the problem still remains as to why the relative temporal/locative nominal is needed in the construction concerned. Recall that absolute temporal/locative nominals are predicates which possess an open individual variable and a Davidsonian argument. Though absolute temporal/locative nominals are eligible predicates as discussed above, their Davidsonian argument could not be spelt out automatically. According to the Davidsonian argument visibility hypothesis, the Davidsonian argument must be realized to generate a grammatical sentence. I assume that the relative temporal/locative nominal is applied to specify the Davidsonian argument. And the

ungrammatical construction will be salvaged once the Davidsonian argument is present. If such is the case, it is expected that the occurrence of the relative temporal/locative adjunct is capable of saving an ungrammatical verbal predication construction as well. Consider the following sentences:

(22) a. ?Ta shang ban.

He have work

Literal: 'He works.'

b. Ta jintian shang ban.

He today have work

'He works today.'

(23) a. \*Wo teng.

I pain

Literal: 'I have a pain.'

b. Wo zheli teng.

I here pain

'I have a pain here.'

It has been noticed that verbal predication in Mandarin Chinese cannot stand independently in some cases (Kong 1994; Hu and Shi 2005; Tsai 2008, among many others). As illustrated above, the occurrence of relative temporals/locatives can rescue

the incomplete sentence and make them grammatical.

As a matter of fact, absolute temporal/locative nominals can also function as adjuncts and induce the Davidsonian argument. Let us see what will happen if we change the relative temporal/locative nominals in the above sentences into absolute ones:

(24) a. ?Ta shang ban.

He have work

‘He works.’

b. Ta xingqiyi shang ban.

He Monday have work

‘He works on Monday.’

(25) a. \*Wo teng.

I pain

‘I have a pain.’

b. Wo bei teng.<sup>30</sup>

I back pain

‘I have a pain in my back.’

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<sup>30</sup> *Bei* ‘back’ denoting a part of the body is a noun, but it behaves the same as the absolute locative when it is used to indicate the place of the pain.

Clearly, absolute temporal/locatives also save the incomplete sentence since they also indicate the location of the state/event and make the Davidsonian argument spelt out. In this spirit, it is predicted that the clause initial relative temporal nominals can be substituted by absolute temporals/locatives.<sup>31</sup>

See the following examples:

(26) a. Shengdanjie xingqiyi.

Christmas Monday

‘Christmas is Monday.’

b. Xingqiyi Shengdanjie.

Monday Christmas

‘Monday is Christmas.’

c. Shengdanjie ershiwu hao.

Christmas twenty-five date

‘Christmas is on the 25<sup>th</sup>.’

d. Ershiwu hao shengdanjie.

Twenty-five date Christmas

‘The 25<sup>th</sup> is Christmas.’

The above sentences demonstrate that absolute temporal nominals, like relative

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<sup>31</sup> The absolute locative nominal can also appear in the clause initial position as an adjunct. But since both of the two locatives are bare and short in form, the predicative construction is often taken as an appositive construction as in *Beijing shoudu* ‘Beijing is the capital.’ For the distinction between predicative and appositive constructions, I would like to leave it for future research.

temporal/locative nominals, can specify the Davidsonian argument and make the sentence grammatical.

## 2.6 The syntactic structure of the temporal/locative predicative construction

### 2.6.1 Relative temporals/locatives as implicit PPs

The time-related terms in Mandarin Chinese are divided into two groups according to Zhu (1982): temporal noun phrases vs. temporal adverbs. Temporal NPs subsume phrases like *jintian* ‘today’, *shang ge xingqi* ‘last week’, and *xianzai* ‘now’ which could be substituted by *zhe ge shihou* ‘this time’ or *na ge shihou* ‘that time’. The locatives in the clause initial position behave the same and could be substituted by *zhe ge difang* ‘this place’ or *na ge difang* ‘that place’. Temporal adverbs include phrases like *yijing* ‘already’, *gang* ‘just’ or *huran* ‘suddenly’. Clearly, the temporals/locatives occurring in the nominal predication no doubt belong to the temporal nouns.

But according to Jespersen (1932), Larson (1985), Demirdache & Uribe-Etxebarria (2004; 2007), and among others, temporal noun phrases like *jintian* ‘today’, *zuotian* ‘yesterday’, *qianbian* ‘front’ are bare NP adverbs with prepositions preceding them implicitly. In this spirit, the so-called temporal nouns should be renamed as temporal/locative adverbs.

To reanalyze temporal/locative nominals as temporal/locative adverbs does not make an easy story since adverbs are notorious in having distinctive grammatical representations. According to the classical semantics, adverbs are considered as functions mapping from predicates to predicates or from propositions to propositions. And in the Davidsonian (1967) event semantics, adverbs are treated as predicates of the event argument. Syntactically, adverbs are generally taken as adjuncts adjoining to the phrases they modify. To be specific, they could be adjuncts of VP, *v*P, IP or CP depending on the constituents they restrict. Then the question arises as to which node the temporal/locative will be adjoined to. Though the temporal/locative adverbs are to the immediate left of the predicate nominal, the following syntactic operation which adjoins the adjunct to the predicate noun phrase will not be a desired one considering that the temporal/locative adverb is to specify the location of the Davidsonian argument while NP is just a lexical predicate applying to the individual argument:

(27) ...expletive [<sub>NP</sub> adjunct [<sub>NP</sub>NP]]

In what follows, the syntax of time arguments and time adverbs proposed by Demirdache & Uribe-Etxebarria (2004; 2007, et. seq.) (henceforth D&U-E) is introduced in order to give a satisfactory solution to the syntax of the temporal/locative nominal predication construction.

## 2.6.2 The syntax of time arguments/time adverbs: Demirdache&Uribe-Etxebarria

### 2.6.2.1 The syntax of time arguments: D&U-E (2004; 2007)

According to the serial works of D&U-E (2004; 2007, et. seq.), time is further analyzed as utterance time (UT-T), assertion time (AST-T), i.e., the time span focused by Aspect, and event time (EV-T) (the time at which the event/state denoted by  $\nu$ P occurs or holds). Following Klein's (1995) proposal that both tenses and aspects relate two time arguments, they assume that tenses relate the UT-T to the AST-T and aspects then relate the AST-T to the EV-T.

Tenses and aspects are considered as spatio-temporal ordering predicates with the following meanings:

- (28) a. Tense: AFTER—past  
                    BEFORE—future  
                    WITHIN—present
- b. Aspect: AFTER—perfect  
                    BEFORE—prospective  
                    WITHIN—progressive

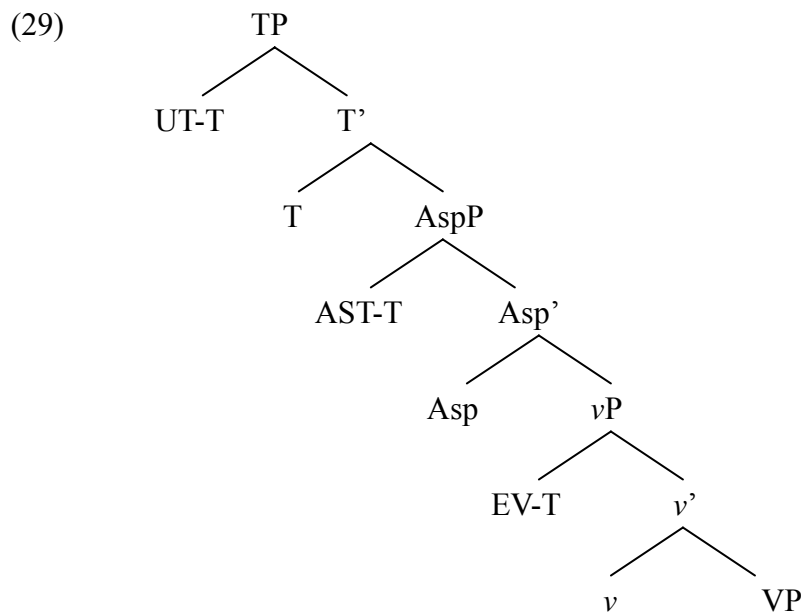
Syntactically, Tense and Aspect have their own projections, the heads of which relating two time-denoting arguments: the external argument of TP is the UT-T which



is situated at the specifier position of TP, its internal argument is the AST-T specified by AspP; The AST-T is also the external argument of AspP whose internal argument is the EV-T denoted by VP (represented as  $\nu$ P in my proposal).

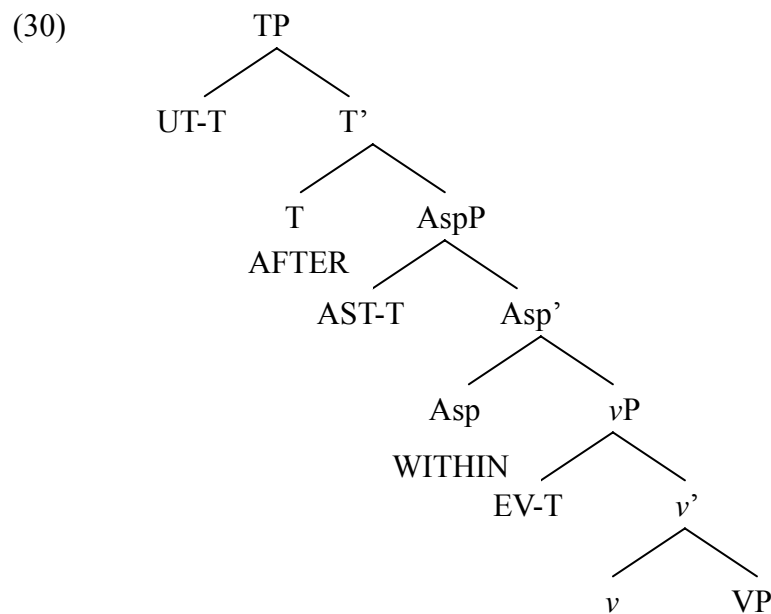
Besides, the external arguments are taken as the reference times of the internal time arguments. Specifically, the external argument of T, i.e., the UT-T, is a reference time of its internal argument, the AST-T; the external argument of Asp, i.e., the AST-T, is a reference time of its internal argument, the EV-T. In such a case, the semantic meanings of the spatio-temporal ordering predicates T and Asp are determined in terms of whether the reference time is before, within or after its internal time argument.

The uniform phrase structure for temporal relations is defined as below:<sup>32</sup>



<sup>32</sup> Note that the projection  $\nu$ P here is instantiated as VP in D&U-E (2004; 2007). Since it is used to accommodate the EV-T and is event-related, I adapted it to  $\nu$ P to keep it conform with the previous notation.

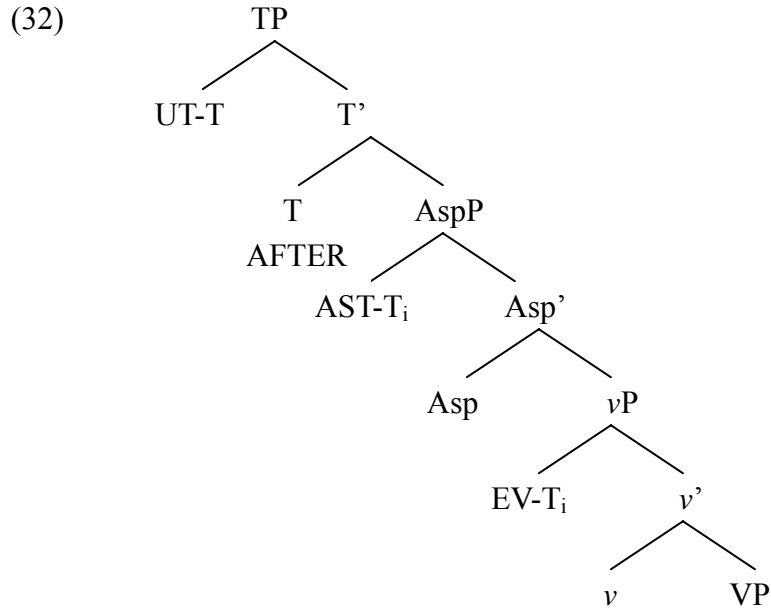
Let us take the sentence ‘John was singing’ for example which has past tense and progressive aspect. Tense in this sentence is the spatio-temporal predicate AFTER, ordering the UT-T after the AST-T. Aspect is the spatio-temporal predicate WITHIN, which orders the AST-T within the EV-T, that is to say, it picks out a time within the interval defined by the EV-T. The temporal structure of the sentence is illustrated below:



To deal with the sentence whose temporal interpretation is with morphological tense but without morphological aspect, i.e., the sentence with simple tense, D&U-E make the following two assumptions (D&U-E 2004:149):

- (31) a. TP and Asp are always projected.
- b. When either  $T^0$  or  $Asp^0$  lacks morphological content, its external temporal argument binds its internal temporal argument.

The following temporal structure of the sentence *Ikkal made a ring* which is with past tense but without morphological aspect is cited from D&U-E (2004:150):

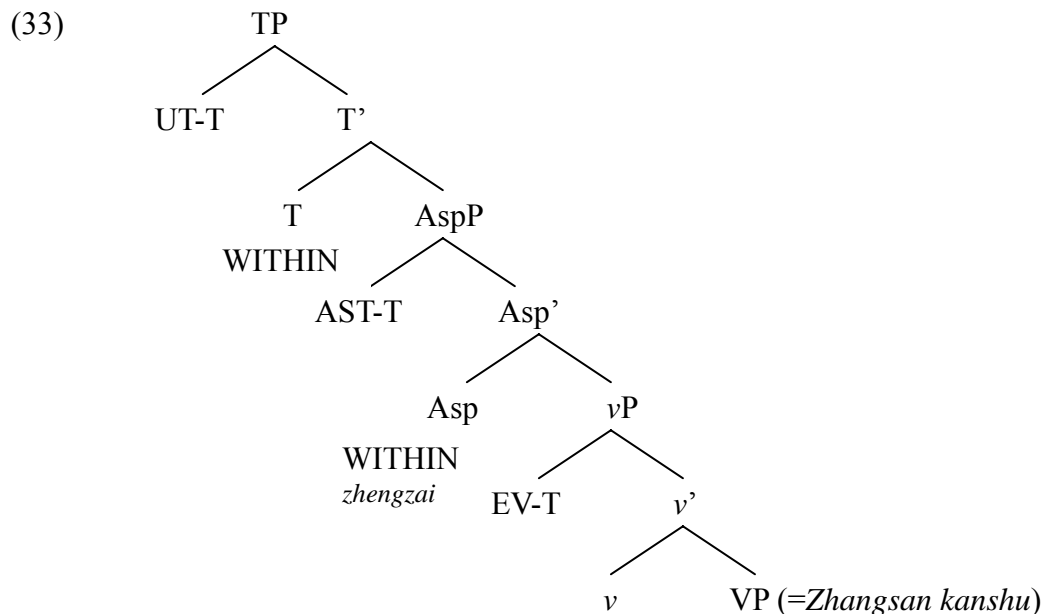


The Tense predicate AFTER indicates that the UT-T is after the AST-T and the EV-T co-indexing with the AST-T is bound by it due to the lack of the morphological aspect.

Note that the temporal structure is not specific to English but applies to all languages, including Chinese. In Chinese, the sentence final particles *le* and *laizhe* encoding the relation between the UT-T and the AST-T can be taken as Tense predicates and aspectual marker *zhe*, *le*, *guo* and *zhengzai* denoting the ordering relation between the AST-T and the EV-T are instantiations of Aspect predicates. Besides, Chinese has considerable amount of temporal expressions, temporal adverbs which behave similarly to temporal predicates.

Let us take the sentence *Zhangsan zhengzai kanshu* ‘Zhangsan is reading’ for

example:



It is obvious that the sentence *Zhangsan zhengzai kanshu* ‘Zhangsan is reading’ is with progressive aspect, *zhengzai* ‘be in progress’ as the Aspect predicate of the sentence indicates that the AST-T is within/in coincidence with the EV-T. Considering that the Chinese sentence tends to be with present tense unless otherwise specified by the temporal expression, we would like to take the default Tense predicate as present instantiated by WITHIN which is encoded as a coincidence of the UT-T and the AST-T.

#### 2.6.2.2 The syntax of time adverbs: D&U-E (2004; 2007)

Based on the syntax of time arguments, D&U-E (2004; 2007) claim that time adverbs are similar to tenses and aspects in that they are also spatio-temporal ordering

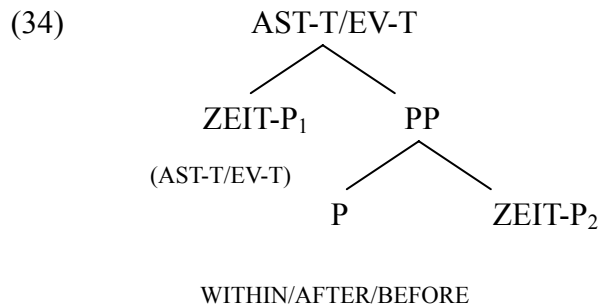
predicates which project their argument structure in the syntax and establish a topological relation as AFTER, WITHIN and BEFORE. This claim applies to all time adverbials irrespective of their semantics and syntactic structure, including adverbs which have the semantics of location and duration and adverbs which have the syntax of PPs, bare NPs, bare CPs, or clausal adjuncts headed by a temporal connective.

Following Zagana (1990) and Stowell (1993) that temporal arguments are syntactically represented as temporal DPs or Zeit Phrases (Stowell 1993) which can be modified, D&U-E (2004) propose that temporal adverbs are restrictive modifiers of the temporal arguments related by the spatio-temporal ordering predicates Tenses and Aspects. “They modify the reference of these time spans by establishing an ordering relation—inclusion, subsequence, or precedence—between the time argument of which they are predicated and the time denoted by their internal argument.” (D&U-E 2004:143) This not only implies that the time adverb is spatio-temporal ordering predicate but also indicates that modification is established via predication: the modifier is predicated of its external argument, AST-T/EV-T. Like the other adjuncts, the time adverbs syntactically adjoin to the elements they modify, to be specific, the temporal arguments Zeit-P whose reference they restrict.

As discussed above, time adverbs are syntactically instantiated as PP irrespective

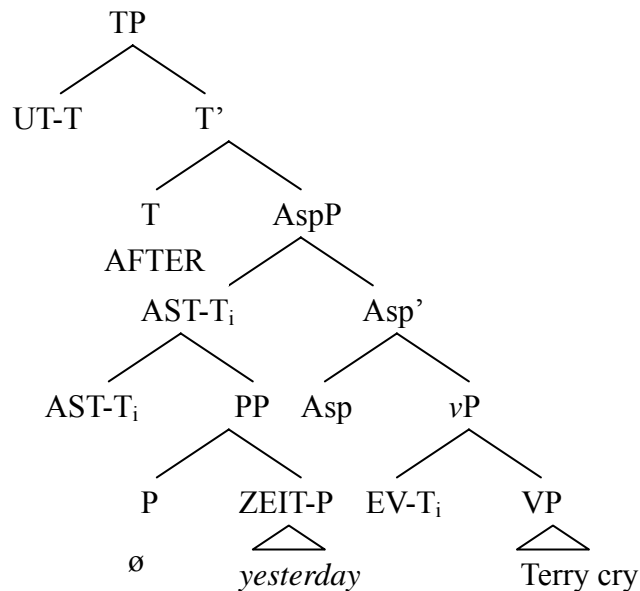
of whether the preposition is phonologically realized or not, the head P relates its internal temporal argument ZEIT-P<sub>2</sub> to its external argument ZEIT-P<sub>1</sub>, namely, the temporal argument they modify.

The syntax of time adverbs is illustrated as follows:



Let us look at the following example adapted from D&U-E (2007:346):<sup>33</sup>

(35) Terry cried yesterday.



In the structure above, the time adverb is a temporal PP predicated of the AST-T, i.e., its external argument. The reference of the external argument AST-T is restricted by

<sup>33</sup> In D&U-E (2007:346), ZEIT-P is further analyzed as [<sub>ZEIT-P</sub>[<sub>Z'</sub> THE[<sub>NP</sub> SIT-T[<sub>NP</sub>]]]], where SIT-T is the temporal interval argument of the noun. For simplicity, ZEIT-P here will not be analyzed.

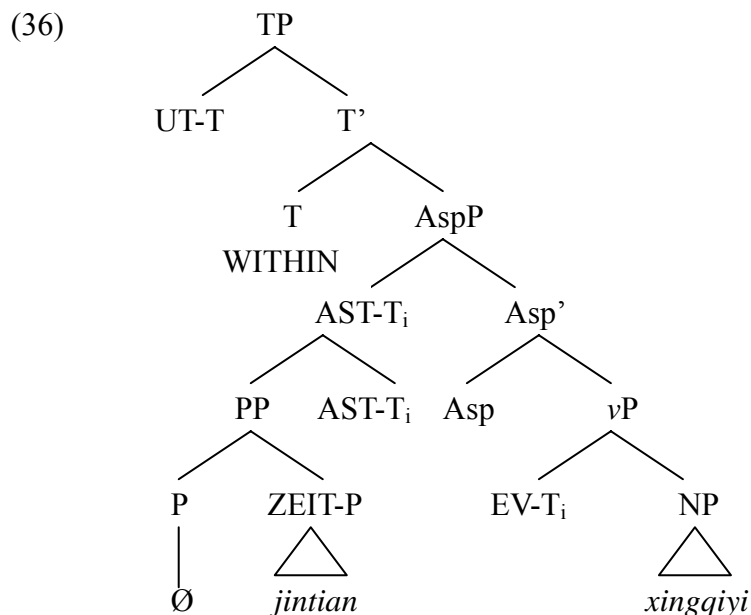
the silent head P via ordering it within the internal argument of PP, ZEIT-P. Since there is no morphological aspect in the sentence, the AST-T and the EV-T are coindexed and the EV-T is located indirectly within the interval denoted by the ZEIT-P.

### 2.6.3 The syntax of the temporal/locative nominal predicative construction

In the above discussion, it is argued that the clause initial temporals/locatives in the temporal/locative nominal predicative construction are adjuncts other than subjects and syntactically they should be treated as concealed PPs with implicit prepositions preceding them à la Jespersen (1932), Larson (1985), D&U-E (2004; 2007), among others. But the question still remains as for where the adjuncts should be adjoined to given that NP is not an appropriate node for them to attach to due to the semantic/syntactic mismatch discussed in Subsection 2.6.1.

D&U-E's (2004; 2007) syntactic theory on time arguments and time adverbs will no doubt give a satisfactory solution to the above question. As discussed above, the temporal adverb PP adjoins to the temporal argument they modify: either the assertion time or the event time of the clause in which occurs. Considering that in Chinese modifiers always precede modifiees instead of following them, a slight revision is needed structurally: the time adverb should be to the left of its modifiee. Taking D&U-E's approach, the sentence *jintian xingqiyi* 'today is Monday' will be

represented as follows:



This sentence is with simple present tense, and the tense predicate here is interpreted as WITHIN, i.e., the UT-T is within the AST-T. Since the sentence has no morphological aspect, the AST-T and the EV-T are coindexed / covalued. The temporal PP is adjoined to AST-T and predicated of it. The reference of AST-T is restricted by ordering this time interval within the internal argument of PP, to be exact, the ZEIT-P *jintian* ‘today’. Due to the restriction of the temporal PP, the value of the AST-T is arrived at, the interpretation of the EV-T is indirectly determined via covaluation.

The other question to be answered is what the relationship between the temporal structure and the grammaticality of the nominal construction is. Recall my proposal posited in Chapter 1 that the Davidsonian argument has to be realized to generate a



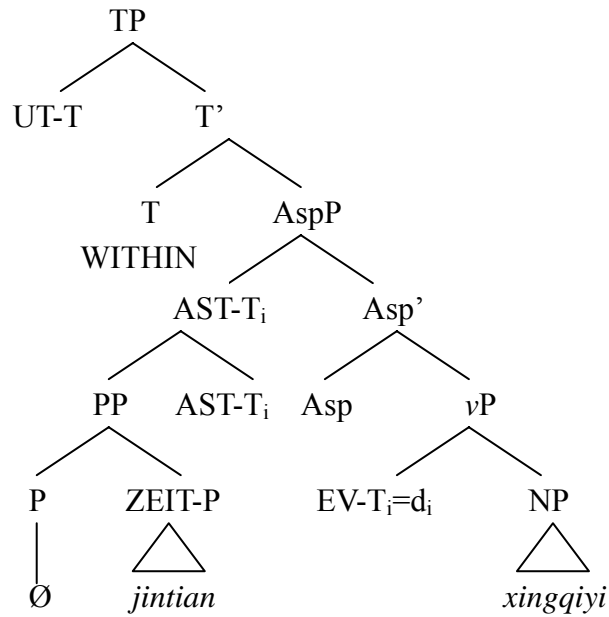
grammatical sentence. It seems that the Davidsonian argument has no representation in temporal structure. The Spec of  $\nu$ P which is supposed to be the location of the Davidsonian argument is occupied by the EV-T in the temporal structure. But the problem would be solved if Kratzer's (1996) assumption is adopted that the Davidsonian argument (the event argument in her sense) is instantiated as the spatio-temporal argument.<sup>34</sup> Since the Davidsonian argument and the spatio-temporal argument happen to be one, the problem with respect to position competition will not exist. As demonstrated in the temporal structure, by the application of the temporal PP, its reference time AST-T is defined and the EV-T gets its value indirectly via coindexing. Put it another way, the value of the Davidsonian is indirectly defined due to the restriction of the temporal PP. Thus, the clause initial temporal is crucial to make the Davidsonian argument visible.<sup>35</sup> The structure of the construction will be slightly modified as follows:

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<sup>34</sup> I will not restrict the Davidsonian argument within the temporal/spatial domain. Actually, the core denotation of the Davidsonian argument should be the nominalized event. Since the Davidsonian argument is taken as an entity (Davidson 1967), I assume that like the other entities which have feature requirements on case, person and gender, the Davidsonian argument also has its feature requirements, say, features of spatial, temporal, evaluation, etc. I propose that the spatio-temporal argument should be taken as part of the Davidsonian argument as elaborated in Chapter 1.

<sup>35</sup> The analysis to temporal structures is analogous to locative structures. The clause initial locative will have the same function as its temporal counterpart does. The distinction lies in whether the Davidsonian argument is defined temporally or spatially. The details for the locative structure will be left open here.

(36')



## 2.7 The predictions

### 2.7.1 Nominals with a spatio-temporal argument as eligible predicates

Under the assumption that the adjunct in the clause initial position is to specify the location of the Davidsonian argument and make it visible, I will go a little further and argue that the bare nominal predicate will not be restricted to the temporal/locative ones provided that a Davidsonian argument can be induced by the temporal/locative adjunct. Take the following examples:

(37) a. Jintian miaohui.

Today temple fair

‘Today is Temple fair.’

b. Mingtian juesai.

Tomorrow final

‘Tomorrow is the final.’

c. Xingqiyi kaoshi.

Monday examination

‘The examination is on Monday.’

d. Nabian shuzhan.

There book fair

‘There is the book fair/the book fair is there.’

Note that the nominal predicates in the above examples are different from the ordinary noun phrase. One would notice that these nominals are all used to denote some kind of activity which contain a verb like *hui* ‘meet’ in *miaohui* ‘temple fair’, *sai* ‘compete’ in *juesai* ‘final (competition)’, *kao* ‘exam’ in *kaoshi* ‘examination’, and *zhan* ‘exhibit’ in *shuzhan* ‘book fair’, they could be taken as deverbal nominals or event nouns with an inherent implicit event argument (cf. Larson 1998). Suppose ‘d’ is the Davidsonian argument and ‘x’ the individual argument, the semantics and the inner structure of the deverbal nominals are as follows:

(38) a.  $\lambda d \lambda x P(d, x)$

b.  $[_{vP} d [ v [_{NP} x N ] ] ]$

This claim is supported by the fact that this kind of nominals can co-occur with verbal classifiers like *ci* or/and *chang*:

(39) a. yi    ci    miaohui  
         one Cl<sub>verbal</sub> temple fair  
         ‘a temple fair’

b. yi    chang/ci    juesai  
         one Cl<sub>verbal</sub> final  
         ‘a final’

c. yi    chang/ci    kaoshi  
         one Cl<sub>verbal</sub> exam  
         ‘an examination’

d. yi    chang/ci    shuzhan  
         one Cl<sub>verbal</sub> book exhibition  
         ‘a book fair’

The deverbal nominal/event noun is distinctive from the common noun in that it possesses an innate spatio-temporal argument. This claim can be supported by the following contrasts:

(40) a. miaohui/juesai/kaoshi/shuzhan            de            shihou/didian  
         tempel fair/final/examination/book fair    DE            time/location

- |         |   |      |                      |
|---------|---|------|----------------------|
| b.      | *shu/xuesheng/dalou/laoshi              | de   | <u>shihou/didian</u> |
|         | book/student/building/teacher           | DE   | time/location        |
| (41) a. | miaohui/juesai/kaoshi/shuzhan           | (de) | <u>qijian</u>        |
|         | tempel fair/final/examination/book fair | DE   | duration             |
| b.      | *shu/xuesheng/dalou/laoshi              | de   | <u>qijian</u>        |
|         | book/student/building/teacher           | DE   | duration             |

As is observed, the innate spatio-temporal argument of deverbal nominals/event nouns can be spelt out by extracting it from the noun, but the extraction is not allowed for the common noun for the reason that the common noun does not possess such an innate spatio-temporal argument as the deverbal noun/event noun does. In such a case, the application of the adjunct induces the event argument and makes it visible by specifying the time/location of the Davidsonian argument. For the common noun, the employment of the adjunct will not make it grammatical nominal sentence due to the lack of the innate spatio-temporal argument. See the examples below:

- (42) a. \*Jintian dianying.

Today movie

Literal: 'It is movie today.'

b. Jintian shouyingshi.

Today premerie

‘It is premerie today.’

*Dianying* ‘movie’ is a common noun without any connotation concerning the schedule of the show, while *shouyingshi* ‘premerie’ means the first show of the movie scheduled in advance, and will have an innate temporal argument. By the application of the adjunct, the innate temporal argument would be made visible which guarantees the grammaticality of the sentence.

#### 2.7.2 Time-related adverbs and nominal predicates

A considerable number of studies (Chao 1968; Zhu 1982; Wei 2004, among others) have noticed that adverbs may be used to modify the predicate nominal in the nominal predication construction. See the following examples:

(43) a. Jintian gang/dou/cai/yijing xingqisan. (cited from Zhu 1982)

Today just/already/just/already Wednesday

‘It is just Wednesday today.’

b. Ni cai shagua ne. (cited from Wei 2004)

you indeed fool SFP

‘You are indeed a fool!’

c. Nage ren jianzhi pianzi. (cited from Chao 1968)

that-Cl person simply fraud

‘That person is simply a fraud.’

d. Na yiding hao xiaoxi. (cited from Chao 1968)

that certainly good news

‘That is certainly a piece of good news.’

Based on the above examples, Wei (2004) argues that nominal predication in Mandarin Chinese is not bare in that adverbs precede the nominal predicate in many cases. As a matter of fact, the adverbs not only occur in the nominal predication but also salvage the ungrammatical nominal predicative constructions. Consider the following examples:

(44) a. \*Ta xuesheng.

He student

‘He is a student.’

b. Ta cai xuesheng.

He just student

‘He is just a student.’

c. Ta ye xuesheng.

He also student

‘He is also a student.’

In distinction to Wei (2004), the adverbs in the above sentences are not present in the grammatical nominal predication construction. Per contra, they occur in the illegitimate nominal predication constructions whose presence rescues the ungrammatical sentences as illustrated above. Thus, it would be more appropriate to claim that adverbs can save the nominal predication construction.

Since the grammatical properties of adverbs are heterogeneous à la the previous studies (Cinque 1999; Ernst 2004, among others), not all adverbs are capable of salvaging the ungrammatical nominal predication construction.<sup>36</sup> It is observed that a

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<sup>36</sup> Besides the time-related adverbs, it is observed that the following two groups of adverbs are also capable of saving the ungrammatical nominal predication:

(i) some speaker-oriented adverbs:

a. Ta yexu xuesheng.

He probably student

‘Probably, he is a student.’

b. Ta keneng xuesheng.

He probably student

‘Probably, he is a student.’

c. Ta jingran/juran xuesheng.

He actually student

‘It is strange that he could be a student.’

(ii) some focal adverbs:

c. Ta cai xuesheng.

He just student

‘He is just a student.’

d. Ta ye xuesheng.

He also student

‘He is also a student.’

e. Ta (jinjin) xuesheng eryi.

He only student only

‘He is only a student.’

Since these two types of adverbs are irrelevant to the concern of this chapter, we will ignore them here and leave them for further study.



great number of time-related adverbs are of this kind of capacity.<sup>37</sup> See the following

examples:

(45) a. Ta rengran xuesheng.

He still student

‘He is still a student.’

b. Ta yizhi xuesheng.

He always student

‘He has been a student.’

c. Ta yiqian xuesheng.

He before xuesheng

‘He was a student before.’

d. Ta hai xuesheng.

He still student

‘He is still a student.’

e. Ta ganggang jiaoshou.

He just professor

‘He is just promoted to professor.’

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<sup>37</sup> Since time-related adverbs are heterogeneous as well, the semantics of them are distinctive and their compatibilities with the nominal predicate are sometimes restricted by various semantic constraints. In such a case, not all time-related adverbs can co-occur with or license the nominal predicate.

f. Ta cengjing xuesheng.

He once student

‘He had once been a student.’

g. Ta zhijin xuesheng.

He up to now student

‘He has been a student up to now.’

Though the time-related adverbs discussed above are distinctive in semantics, they agree in one point that all of them denote a relationship between the event time and the speech time/reference time. Thus, they are temporal predicates relating two temporal arguments à la D&U-E (2004; 2007).

But different from the bare NP time adverbs discussed above, the temporal adverbs occurring in the above sentences are not restricted to PPs adjoined to the AST-T/EV-T which specify the ordering relation between the AST-T and the internal temporal argument of PP. The temporal adverbs occurring in the above sentences can be roughly divided into two types:

(i) temporal predicates relating the UT-T to the AST-T:

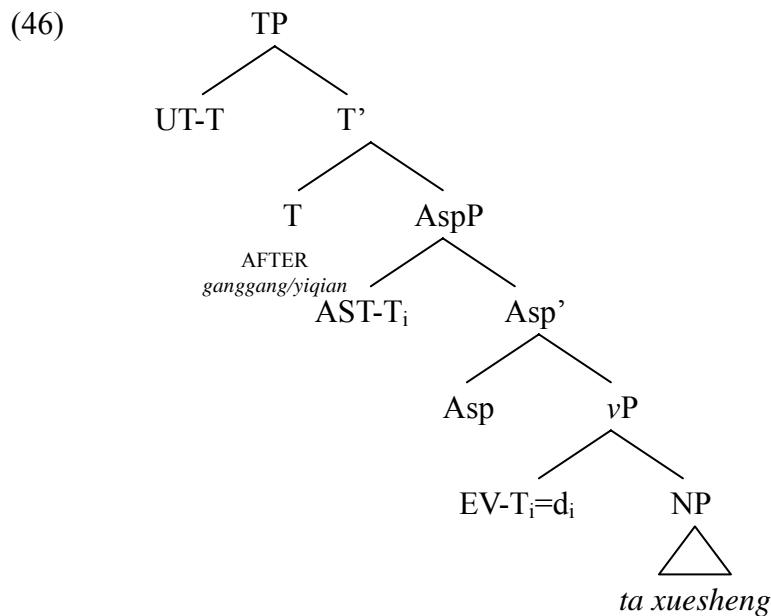
*yiqian* ‘before’, *ganggang* ‘just’;

(ii) temporal predicates relating the UT-T to the AST-T and/or the AST-T to the EV-T:

- a. *cengjing* ‘once’;
- b. *yizhi* ‘till now’, *rengran* ‘still’, *zhijin* ‘up to now’.

The temporal adverbs of (i) are equivalent to the Tense predicate AFTER which orders the AST-T after the UT-T, and the AST-T and the EV-T will be covalued since there is no aspect reading involved here.

The syntactic structure of this type of sentences will be illustrated as follows.<sup>38</sup>



The temporal relationship expressed by the temporal adverbs of (ii) is more complicated than that expressed by the temporal adverbs of (i). The temporal interpretation is determined by the ordering of the UT-T and the AST-T in conjunction with the ordering of the AST-T and the EV-T. Thus, both Tense predicates and Aspect predicates count here. Furthermore, an/some implicit temporal predicate(s)/PP(s)

<sup>38</sup> The subject is located in its base-generated position in the structure. Adopting Chomsky’s (1995, et seq.) assumption which allows multiple Spec, I propose that the subject will move to SpecTP ultimately to satisfy the requirement of EPP. Since my concern here is how to make the Davidsonian argument visible, the operation on subject raising is not represented.

is/are required to make the temporal interpretation explicit. For example, the adverb *yizhi* ‘till now’ denotes an event/state which starts from sometime in the past and is in progress till the time of the utterance, therefore, the starting point of time is needed to make its temporal meaning explicit. Actually these implicit temporal arguments can be spelt out in the form of temporal adverbial phrases/clauses. Consider the following examples:

(47) a. Liang nian le, ta regran xuesheng.

Two year LE, he still student

‘Two years has passed, he is still a student.’

b. Liang nian lai, ta yizhi xuesheng.

Two year come, he till now student

‘For two years, he has been a student.’

c. Wo jiandao ta de shihou, ta hai xuesheng.

I see he DE time he still student

‘He was still a student when I met him.’

d. Ni lai de shihou, ta ganggang jiaoshou.

You come DE time he just professor

‘He was just promoted to professor when you came.’

e. Wushi niandai de shihou, ta cengjing xuesheng.

Fifty decade DE time he once student

‘He had once been a student in 1950’s.’

f. Cong nashi qi, ta zhijin xuesheng.

From that time start he up to now student

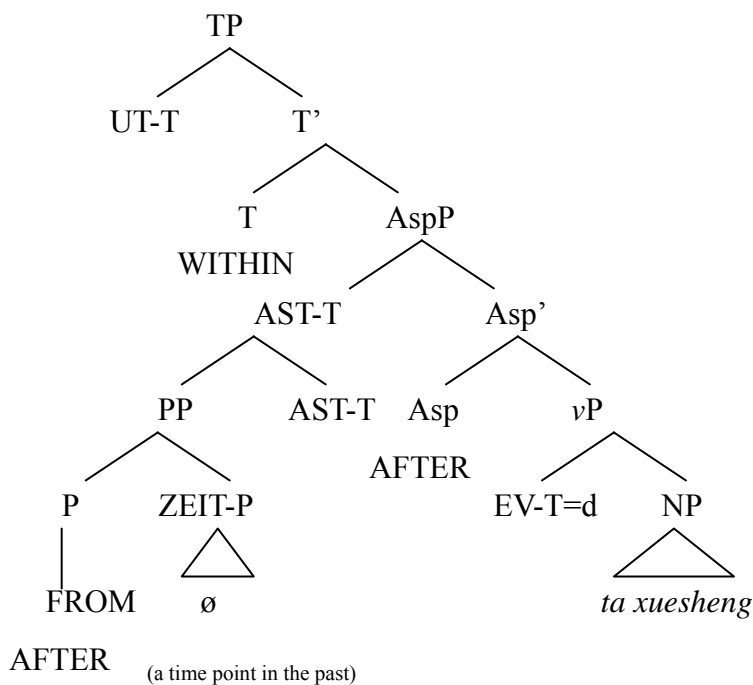
‘He has been a student from then on.’

Let us look at the structure of the following sentence:

(47) Ta yizhi xuesheng.

He (from sometime in the past) till now student

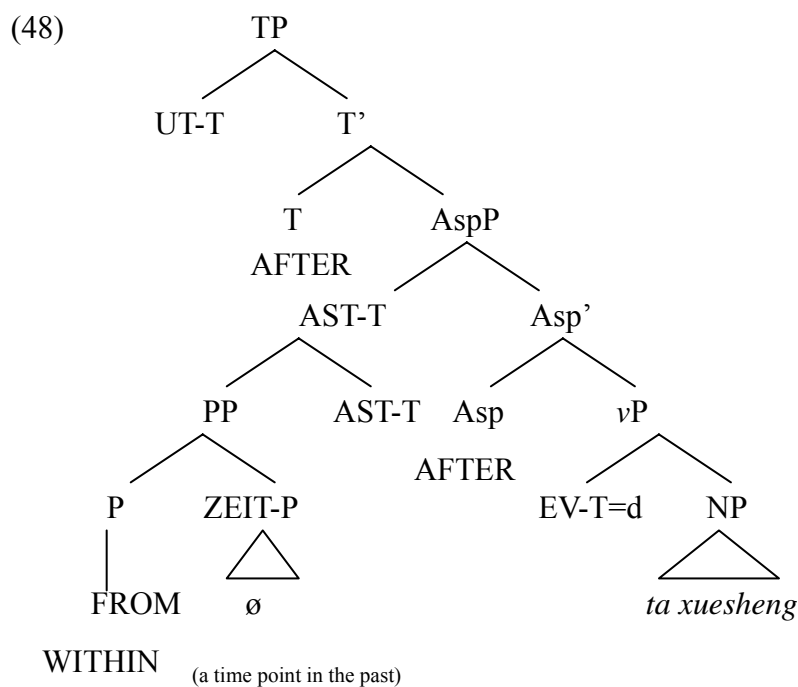
‘He has been a student (from sometime in the past) till now.’



The temporal adverb *yizhi* ‘(from sometime in the past) till now’ makes the sentence with the present tense and perfective aspect and thus expresses three temporal

relations: (i) the UT-T is within the AST-T; (ii) the AST-T is after the EV-T; (iii) the AST-T is restricted by an implicit PP via ordering the AST-T after the internal argument of PP, a time point in the past. The EV-T is thus defined via temporal predication and modification.

The sentence *ta cengjing xuesheng* ‘he had been a student’ has the similar temporal structure with a slight difference in the temporal interpretations of the Tense predicate and prepositional predicate. The temporal structure is represented below:



The examples above illustrate that the temporal adverbs are temporal predicates ordering the spatio-temporal argument. By the application of them, the EV-T is defined, that is to say, the spatial/temporal location of the Davidsonian argument is specified which results in the visibility of the Davidsonian argument.

### 2.7.3 Durative phrases and nominal predication

In Mandarin Chinese, besides temporals/locatives and time-related adverbs, durative phrases are also observed to salvage the ungrammatical nominal predicative sentence.

Consider the following examples:

(49) a. Ta xuesheng liang nian le.

He student two year LE

‘He has been a student for two years.’

b. Ta gongren yi bei-zi le.

He worker one generation AFF LE

‘He has been a worker all his life.’

c. Ta changzhang hao yi zhen-zi le.

He factory director good one while-AFF LE

‘He has been a factory director for a while.’

d. Ta yisheng haoduo nian le.

He doctor many year LE

‘He has been a doctor for many years.’

Like the temporal adverbs discussed above, durative phrases are also taken as PPs with an implicit preposition before them (D&U-E 2004; 2007). Durative phrases are supposed to modify the AST-T/EV-T via ordering the AST-T/EV-T and the internal

temporal argument of PP.

Notice that the temporal argument that the durative phrase adjoined to is different depending on its different interpretations. According to Lin (2007), durative phrases have two distinctive interpretations in terms of the situation type of the sentence they modify. He argues that durative phrases are to measure the duration of an event when the situation described involves no change of state or non-completion of the event. When the situation described involves a change of state or the completion of an event, durative phrases are interpreted as describing the time elapsed since completion of the event (Lin 2007:31).<sup>39</sup> Syntactically, when the durative phrase modifies an event without change of state, it restricts the EV-T and the head of the temporal adverb phrase P has the meaning of WITHIN, i.e., the time span denoted by the EV-T is within the internal argument of P, i.e., the duration of time; When the durative phrase restricts an event with a change of state, it is adjoined to the AST-T and the temporal predicate measures the duration of the AST-T by relating it to the time span represented by its internal argument.

Since the durative phrase in the nominal predication construction is to measure the duration of an event without change of state, the durative phrase will be adjoined to the EV-T. Note that an implicit PP is required to modify the AST-T in the sentence

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<sup>39</sup> Lin (2007) argues that “the duration since completion of an event” should be corrected as “the duration of the consequent state resulting from an event” (Lin 2007:32).

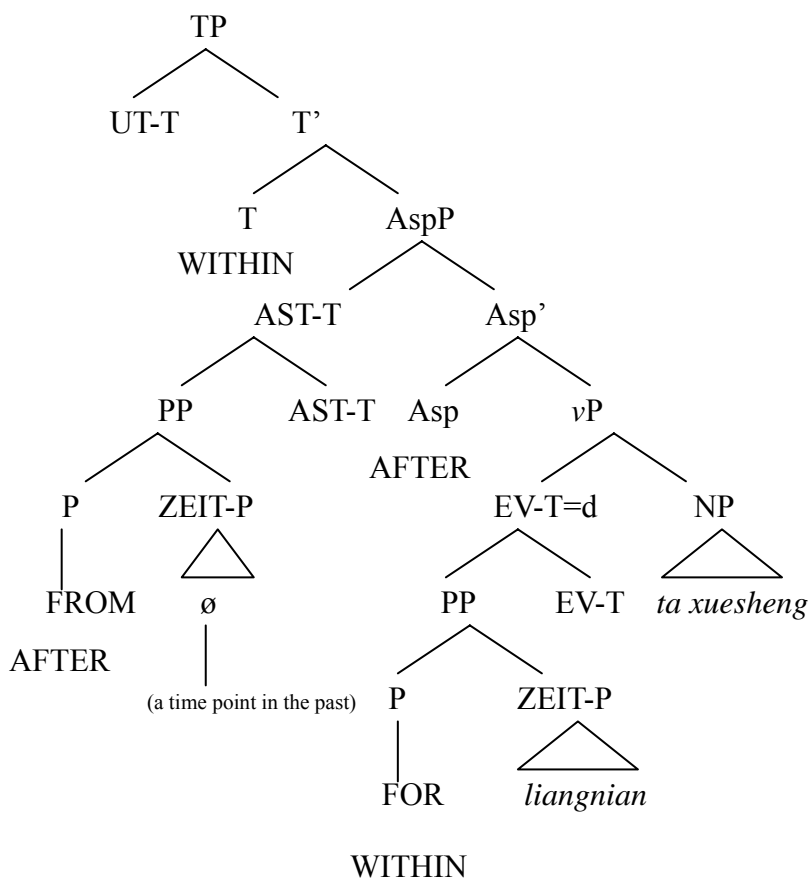


for the reason that the duration should be measured from a starting time point. See the temporal structure of the following sentence:

(50) Ta xuesheng liang nian le.<sup>40</sup>

He student two year LE

‘He has been a student for two years.’



<sup>40</sup> The structure here just demonstrates how the Davidsonian argument is valued without touching upon the issue of word order. To derive the right word order, I assume that the NP has to undergo upward movement to SpecvP. As supposed by Lin (2007), what the durative phrase describes here is the duration of the event, in such a case, the NP located at the lexical level is not accessible to the domain in which the durative phrase is located. It has to be moved to the layer of eventuality phrase to be predicated of by the durative phrase. The similar proposal is observed in Liao (2004). Of course, the subject in the NP may move to SpecTP to satisfy the EPP requirement and the NP movement to SpecvP is actually a remnant one.

The example above illustrates that the durative phrase like the other temporal adverbs can help to determine the value of the EV-T. This will apparently make the Davidsonian argument visible and save the nominal predication construction.

#### 2.7.4 Temporal particles

Among the sentence final particles in Mandarin Chinese, two of them are semantically regarded as tense-denoting, to be specific, sentence final particles *le* and *laizhe*. It could not be a coincidence that both particles are of the capability to rescue an incomplete nominal predicative construction as what they do to verbal predication. In what follows, I would examine the two temporal particles respectively.

##### 2.7.4.1 The inchoative *le*

Before proceeding, let us consider the following examples:

(51) a. #Ta jiaoshou.

He professor

‘He is a professor.’

b. Ta professor le.

He professor LE

‘He becomes a professor.’

(52) a. #Ta yisheng.

He doctor

‘He is a doctor.’

b. Ta yisheng le.

He doctor LE

‘He becomes a doctor.’

Among the various interpretations to the sentence final particle *le*, one of the most dominant views is that *le* is to denote a change of state (Chao 1968; Zhu 1982; Hu & Shi 2005, among others) and is therefore addressed as inchoative *le*. Following Hale and Keyser (1993), inchoative semantically denotes either a relation in which a dynamic event *e* implicates an interrelation *r* or a relation in which a dynamic event *e* implicates a state *s*, as displayed in (53).

(53)  $e \rightarrow r ; e \rightarrow s$

It is observed that the application of the inchoative *le* in Chinese tends to force the second interpretation, i.e., to express a relation in which a dynamic event *e* implicates a state *s*. The example below demonstrates the existence of an implicit state in the event structure of inchoative (cited from Hu and Shi 2005):

(54) Ta he san ping pijiū le.

He drink three CL beer LE

‘He can drink three bottles of beer now.’

The clause *ta he san ping pijiū* ‘he drinks three bottles of beer’ cannot stand independently which can be interpreted as ‘he can drink three bottles of beer’, ‘he drank three bottles of beer’ or ‘it is three bottles of beer that he can drink’ depending on the context. While when the inchoative *le* is applied, the sentence is encoded as ‘he could not drink three bottles of beer in the past but now has such a capability of drinking three bottles of beer.’ Clearly, the usage of the inchoative *le* forces a negative implicit state as opposed to the present one. The implication of a state argument by the application of the inchoative *le* is observed in the nominal predication, the only difference lies in that the inchoative *le* does not denote a relationship between an event and a state but between two states.

See the examples below:

(55) Ta daxuesheng le.

He university student

‘He becomes a university student.’

The statement of *ta daxuesheng* ‘he is a university student’ obviously indicates the present state of the subject which involves no interplay between two states. But when

the sentence final particle *le* occurs, the sentence does not denote a simple state but a complicated one in which the relationship between two states is involved, to be specific, the subject has undergone a change of state from not being a university student to the state of being a university student. Thus, when a change of state cannot be forced due to the semantic/pragmatic deficit of the predicate, the sentence is infelicitous to utter as illustrated below:

(56) a. #Ta nongmin le.

He farmer LE

‘He becomes a farmer.’

b. #Ta ren le.

He person LE

‘He becomes a person.’

In the above two examples, the state of ‘being a farmer’ is considered in China to be in the lowest social status and ‘being a person’ is the primary state, thus neither of them is qualified as a state to be changed to in terms of the world knowledge. Thus, the utterances above sound weird to some extent. Of course, they may be salvaged if the context supplies sufficient information to implicate the existence of another state. Suppose when the state of ‘being a farmer’ is someone’s dream which has been realized after his efforts, the speaker can claim that the subject concerned has

succeeded in stepping into this state from his previous one.

In addition to the function of introducing an implicit state to the event structure of the predicate, it is observed that when the inchoative *le* is applied to nominal predication it anchors the achieved state to the utterance time though the state has been realized before the utterance time, in other words, the sentence with the inchoative *le* is equivalent to the English counterpart with present tense and perfect aspect. If the sentence is not fixed at the present tense, the inchoative *le* cannot guarantee the felicity of the sentence and a light verb *cheng (wei)* ‘become’ or the temporal adverb is forced to realize phonologically.

(57) a. Ta daxuesheng le.

He university student LE

‘He has become a university student.’

b. Ta qunian # (chengwei) daxuesheng le.

He last year become university student LE

‘He became a university student last year.’

c. Ta mingnian/henkuai # (jiu) daxuesheng le.

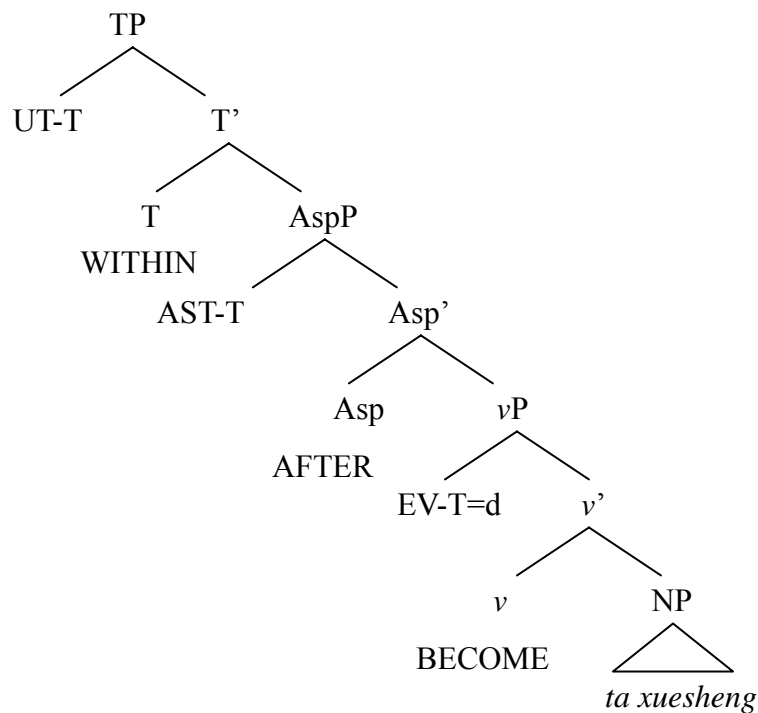
He next year/soon will university student LE

‘He will become a university student next year/soon.’

Considering that the inchoative *le* not only implicates an implicit state but also

anchors the achieved state to the present tense, it is not surprising that it is capable of licensing the Davidsonian state argument in nominal predication since the time of the Davidsonian argument is specified clearly. Again, I will take advantage of D&U-E's temporal structure to illustrate the value assignment to the time of the Davidsonian state argument. The inchoitive *le* in nominal predication is assumed to be the composite of a tense predicate WITHIN and an aspect predicate AFTER indicating the ordering of the utterance time UT-T, the aspect time AST-T and the event time EV-T. The eventuality predicate indicating the eventuality type is supposed to be an unarticulated *cheng (wei) BECOME*:<sup>41</sup>

(58)



<sup>41</sup> The implied state *s* is supposed to be included in the semantics of BECOME and the structure will not be decomposed to discuss the syntactic position of it. Besides, the subject in the structure is located in its original position which should be raised to SpecTP ultimately.

#### 2.7.4.2 The temporal particle *laizhe*

Like the inchoative *le*, the temporal particle *laizhe* can rescue the incomplete sentence as well:

(59) a. #Ta yisheng.

He doctor

‘He is a doctor.’

b. Ta yisheng laizhe.

He doctor LAIZHE

‘He was a doctor.’

(60) a. #Zhe zuo lou tushuguan.

This Cl building library

‘This building is a library.’

b. Zhe zuo lou tushuguan laizhe.

This Cl building library LAIZHE

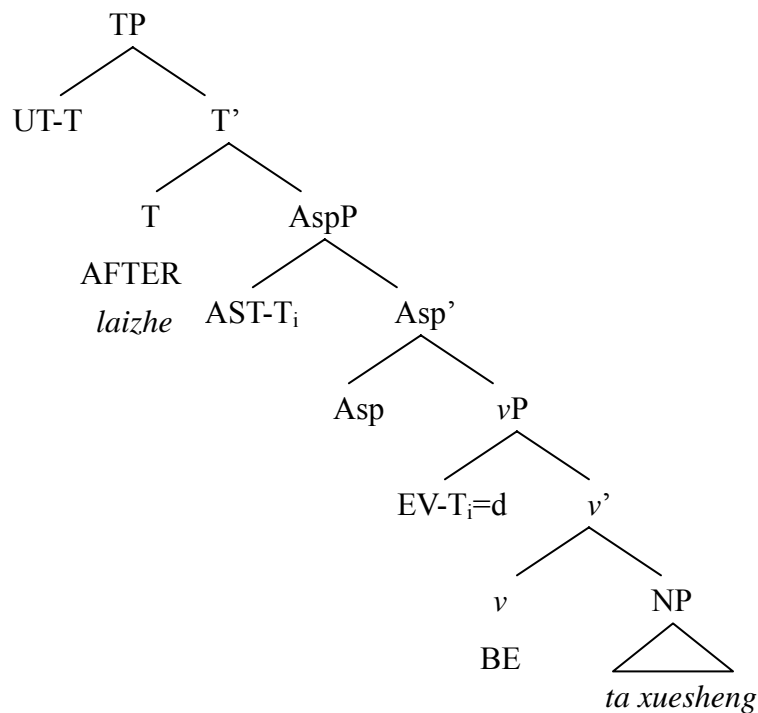
‘This building was a library.’

Comparing with the inchoative *le* which not only implicates an implicit state but also links the achieved state with the utterance time, the semantics of the temporal particle *laizhe* is much simpler. Following Zhu (1982), among others, *laizhe* is used to indicate a past event/state. In this connection, it is equivalent to a tense predicate which orders



the event time before the utterance time in the sense of D&U-E. Specifically, the UT-T is after the AST-T and the AST-T is coindexed with the EV-T due to the lack of the aspect predicate. The value of the Davidsonian argument is thus realized via the interaction among the UT-T, the AST-T and the EV-T. The temporal structure of the nominal predicate construction with *laizhe* is demonstrated as follows:

(61)



The examples above show that the temporal particles in Chinese behave similarly as the temporal adverbs which specify the ordering relations among the UT-T, the AST-T and the EV-T. The value of the Davidsonian state argument is assigned in the interplay of the three. The incomplete sentence is thus saved via the specification of the Davidsonian argument.

## 2.8 The summary

In this chapter, I mainly discuss the temporal/locative nominal predication construction. According to Ma (1991), temporal nominals may be classified into two types: absolute temporal nominals whose denotation is independent of the context and relative temporal nominals whose denotation is context-dependent. The same classification applies to locatives as well. Along with this classification, two restrictions are observed: (i) relative temporal/locative nominals are not capable of being predicates; (ii) the best candidates for subjects, i.e., the typical determiner nominal phrases are prohibited to appear in the clause initial position, which implies that the relative temporal/locative nominals in this position are adjuncts rather than subjects.

As for the first restriction, I assume that the asymmetry between absolute and relative temporal/locative nominals is due to their different syntactic structure, absolute temporal/locative nominals are NPs which have an individual variable while relative temporals/locatives do not have such a variable. As for the second restriction, I propose that relative temporal/locative nominals in the clause initial position are adjuncts rather than subjects, whose contribution is to induce the Davidsonian argument and turn a lexical predicate into a predicate. In such a case, the presence of the temporal/locative adjunct is crucial for the grammaticality of the nominal

predication construction.

Following Jespersen (1932), Larson (1985) and D&U-E's (2004; 2007), the temporals/locatives occurring in the clause initial position are bare NP adverbs with an implicit preposition preceding them. Adopting D&U-E's (2004; 2007) syntactic theory on time arguments and time adverbs, the temporal structure has three temporal arguments: UT-T, AST-T and EV-T, and Tense and Aspect are all spatio-temporal ordering predicates relating two time arguments. The temporal adverb modifying the AST-T/EV-T adjoins to the phrase it modifies and the head of the time adverb P is also a spatio-temporal ordering predicate relating two time arguments. The EV-T, an instantiation of the Davidsonian argument will be defined via temporal predication and modification. This accounts for why the occurrence of the bare NP adverbs, i.e., the temporals/locatives occurring in the clause initial position, contributes to the grammaticality of the nominal predication construction.

The assumption that the function of the temporal/locative is to induce the Davidsonian argument of the predicate is supported by the following facts: (i) only nominals with an innate spatio-temporal argument are eligible as predicates; (ii) time-related adverbs denoting the relationship between the event time and the speech time has the capacity to induce the Davidsonian argument; (iii) durative phrases which is predicated of an event argument is capable of licensing a nominal predicate

construction; (iv) temporal particles are of the same capability to spell out the Davidsonian argument.

## CHAPTER 3 MODIFIED NOMINALS AND NOMINAL PREDICATION

### 3.1 Introduction

In the last chapter, I have discussed the temporal/locative nominal predicative construction and found out that the clause initial temporal/locative is crucial for the grammaticality of the construction since they can specify the spatial/temporal location of the Davidsonian argument and make it visible. In this chapter, I would like to discuss the construction whose predicate is the modified noun phrase and see if the Davidsonian Argument Visibility Hypothesis is applicable to them.<sup>42</sup> The following issues are to be explored:

- (i) The classification of the modifiers;
- (ii) The classification of the modifiees;
- (iii) The restrictions on the modifiers;
- (iv) The functions of the modifier.

### 3.2 The previous studies on modified nominal predicates

Apart from bare nominals, it has been observed (Zhu 1982; among others) that most predicates occurring in the nominal predicative construction are modified noun

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<sup>42</sup> Modified noun phrases in this study subsume all nominals with a modifier/modifiers without distinguishing whether the modifier(s) is/are a morpheme/morphemes or a word/words. In other words, both compounds and nominals with a modifier/modifiers are included.

phrases. See the examples below:

(1) a. Ta Guangdong ren.

He Guangdong person

‘He is from Guangdong.’

b. Ta waike yisheng.

He surgery doctor

‘He is a surgeon.’

Though this phenomenon has been observed for a long time, the relationship among the modifier, the modifiee and the subject has not been noticed until Wei’s (2004) detailed study. In what follows, I will review Wei (2004) briefly and see whether his account is satisfactory to solve the problem as for why the occurrence of modifiers can contribute to the grammaticality of the sentence.

### 3.2.1 A review on Wei (2004)

Based on the previous study on nominal predication in Mandarin Chinese, Wei (2004) develops the idea that the nominal predicate manifests a kind of modifier-modifiee pattern, performing a kind of ‘modification predication’ with the subject; The matrix small clause is structurally ‘not-so-bare’ rather than ‘bare’: a modification predication phrase (PredP), NumP or NP modifier are allowed to intervene between the subject and the predicate nominal, as illustrated in (2):

(2) [Subject ... [PredP [NumP/NP modifier [<sub>N</sub> modifiee]]]]

In Wei's view, nominal predication should be treated as a relationship among the subject, the modifier and the modifiee. He argues that a triangular relationship exists among the three, where modificational predication is compositionally generated from two kinds of predication: inner predication and outer predication. According to him, inner predication occurs between modifiee and (V)-modifier, with the former functioning as subject and the latter as predicate; Outer predication is implemented between the matrix subject and the composite modifiee-(V)-modifier predicate.

Based on this assumption, he proposes that all the nominal predicates may be decomposed into two parts: modifier and modifiee, and an implicit verb is supposed to occur in between the two. And the relationship between the subject and the modifiee should be either that of identity or that of possession.

### 3.2.2 The problems in Wei (2004)

Although his analysis is insightful, it is not without problem. The major problem is that it is too powerful and over-generalized. The overgeneralization is in two folds: Firstly, not all nominal predicates, e.g. the bare nominal predicate discussed above, can be decomposed into the parts of modifier and modifiee as illustrated below:

(3) a. Qianbian Hongkan.

Front Hongkan

‘The front is Hongkan.’

b. Jintian Chunfen.

Today Chunfen

‘Today is Chunfen (a solar term indicating the coming of spring).’

Clearly, the bare nominal predicates in the above examples are all proper nouns which cannot be decomposed.<sup>43</sup>

Secondly, not all modified noun phrases can function as nominal predicates.

Take the following sentences:

(4) a. \*Ta congming (de) xuesheng.

He clever DE student

‘He is a clever student.’

b. \*Ta piaoliang (de) guniang.

She beautiful DE girl

‘She is a beautiful girl.’

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<sup>43</sup> The decomposition is possible unless we assume with Kayne (2005) that there is a “silent” noun denoting PLACE or TIME.



c. \*Zhangsan nianqing ren.

Zhangsan young man

‘Zhangsan is a young man.’

d. \*Zhe gao lou.

This tall building

‘This is a tall building.’

Though the nominal predicates in the above sentences are modified noun phrases and an ident relationship is held in between the subject and the modifiee, they cannot save the ungrammatical sentences.

In what follows, I would like to reexamine the properties of modifiers and modifiees and try to give a general picture of the modified nominal predicate in the copulaless nominal predication construction.

### **3.3 The classification of the modifiee**

Before I move on to the restrictions on the modifier, I would like to examine the restrictions on the modifiee, i.e., the head noun of the modified noun phrase. It is observed that head nouns occurring in the modified nominal predicates can be divided

into three groups:

Type A: Common nouns

(5) a. Ta Meiguo ren.

He America person

‘He is American.’

b. Zhe dianshiji tianxian.

This TV antenna

‘This is the antenna of the TV set.’

Type B: Nominals expressing professions or titles

(6) a. Ta daxue laoshi.

He university teacher

‘He is a university teacher.’

b. Wo Ligong Daxue de xuesheng.

I polytechnic university DE student

‘I’m a student of the Polytechnic University.’

c. Ta na jia gongchang de changzhang.

He that CI factory DE factory director

‘He is the director of that factory.’

d. Aobama Meiguo zongtong.

Obama America president

‘Obama is the President of the United States.’

At first sight, the nominals of Type A and Type B are no different since both of them are property-denoting elements and should be common nouns in the sense of classical semantics. While upon close scrutiny, these two types of nominals are distinctive in that the nominals of Type B can be regarded as derived nominals. In other words, they are nominals derived from a verbal root. Following Higginbotham (2000), verbs may be nominalized in three ways:

- (7) a. Event nominalization: examine—examination  
b. Agentive nominalization: examine—examiner  
c. Internal argument nominalization: examine—examinee

Obviously, the nominals of Type B belong to nominals derived via nominalization of agent. Thus, the nominals in the above sentences can be further analyzed as follows:

- (8) a. *laoshi/jiaoshi* ‘teacher’- *jiaoshu de ren* ‘the person who teaches’  
b. *xuesheng* ‘student’- *xuexi de ren* ‘the person who learns’  
c. *changzhang* ‘factory director’- *guanli gongchang de ren* ‘the person who directs the factory’  
d. *zongtong* ‘President’- *tongzhi guojia de ren* ‘the person who presides the

country’.

In the same spirit, Larson (1998) also indicates that B-type nominals have not only an individual argument but also an event argument, in other words, the event argument is introduced by the lexical entry of the noun. Take *laoshi* ‘teacher’ as an example, the B-type nominals will have the following semantic expression in Larson’s notation: <sup>44</sup>

(9)  $\text{Val} (\langle e, x \rangle, \text{teacher}) \text{ iff teaching } (e) \wedge \text{Agent} (x, e)$

In Larson’s view, ‘teacher’ is treated as a two-place predicate, including an event ‘teaching’ and an agent/entity ‘x’.

It seems that the nominals of Type A are not derived from verbs and will not have an event argument. But à la Chierchia (1995), all nominal predicates should have a Davidsonian argument and A-Type nominals as nominal predicates should have a state argument. In such a case, *ren* ‘human’ can be analyzed as having a state argument *shi ren* ‘being human’ as illustrated below:

(10)  $\text{Val} (\langle s, x \rangle, \text{human}) \text{ iff being human } (s) \wedge \text{Theme} (x, s)$

In such a case, the two types of nominals are distinguished in whether they have an event argument or a state argument: the nominals of Type A have a state argument while the nominals of Type B possess an event argument.

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<sup>44</sup> In this section, I follow Larson’s practice and use ‘e’ to stand for event argument, and ‘s’ for state argument.

### Type C: The true empty category

The term ‘true empty category’ is used in the sense of Li (2005, et seq.), referring to the empty nominals following the modification marker *de* which cannot be recovered or supplemented:

(11) a. Zhe ge ren Beijing de  $\emptyset$ .

This Cl person Beijing DE  $\emptyset$

‘This person is from Beijing.’

b. Zhe ge ren gang lai de  $\emptyset$ .

This Cl person just come DE  $\emptyset$

‘This person is a newcomer.’

c. Zhe ge xuesheng xue diannaode  $\emptyset$ .

This Cl student learn computer DE  $\emptyset$

‘This student is a computer learner.’

d. Zhe jian yifu xishi de  $\emptyset$ .

This Cl clothes western style DE  $\emptyset$

‘This piece of clothes is of western style.’

### **3.4 The classification of the modifier: the semantic distinction**

As observed above that not all modified noun phrases can function as nominal predicates in the nominal predication construction, it is necessary to classify the

modifiers before I examine what kind of modifiers may help to salvage the construction.

#### 3.4.1 Intersective and non-intersective: The classical semantics

Semantically, modifiers could be either intersective or non-intersective. The distinction between the two types of modifiers is as follows:

- (i) Intersective modifier: Intersective modifiers refer to modifiers whose application makes the denotation of the modified nominal as the subset of both the denotation of the modifier and the denotation of the head noun. To make it simple, the modified nominal is the intersection of the properties of modifier and the head noun, i.e., the subset shares the common property of the modifier and the head noun. For example, the modified noun phrase ‘a beautiful student’ refers to a person who is not only beautiful but also a student, that is to say, the properties ‘beautiful’ and ‘student’ apply to the same individual. In this sense, the intersective modifier is treated as predicate of the subject as the head noun does. In other words, the intersective modifier is of the semantic type  $\langle e, t \rangle$ . Let us see the following examples:

- (12) a. Zhangsan is a beautiful student.  
 b. Zhangsan is beautiful.  
 c. Zhangsan is a student.

In the above examples, ‘a beautiful student’ is an intersective modified noun phrase.

In such a case, if (12a) holds, then both (12b) and (12c) will hold. The explanation will be rewritten as the logic formula below:

- (13) a. a beautiful student  
 b.  $\lambda x[\text{beautiful}'(x) \wedge \text{student}'(x)]$

Thus, ‘Obama is a young president.’ will be expressed as below:

- (14) a. Obama is a young president.  
 b.  $[\text{young}'(\text{obama}') \wedge \text{president}'(\text{obama}')]$

- (ii) Non-intersective Modifier: Non-intersective modifiers refer to modifiers whose applications make the denotation of modified nominals as the subset of the denotation of the head noun. Let us look at the following example:

- (15) a. Kennedy was an old president.  
 b. Kennedy was old.  
 c. Kennedy was a president.

In (15a), the modified noun phrase ‘an old president’ is non-intersective. Thus, (15a) entails (15c) but does not entail (15b), to be specific, ‘Kennedy was an old president’

only implies that ‘Kennedy was a president’, it does not mean that ‘Kennedy was old’ for the reason that he was assassinated at his forties and had no chance to become old.

(16) For a non-intersective modified noun phrase, if ‘x is ANP’, then ‘x is NP’, but not ‘x is A.’

Clearly, the major distinction between non-intersective and intersective modifiers lies in that the non-intersective modifier does not affect the property of the individual as the intersective modifier does. On the contrary, it is the predicate of the predicate which is of the semantic type  $\langle e,t \rangle, \langle e,t \rangle$ . The distinction between the two types of modifiers will be illustrated below:

(17) a. Bush is an aged president. (intersective)

b. [aged’(bush’)  $\wedge$  president’(bush’)]

(18) a. Bush is a former president.<sup>45</sup> (non-intersective)

b. \*[former’(bush’)  $\wedge$  president’(bush’)]

c. {former president’(bush’)}  $\subseteq$  {president’(bush’)}

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<sup>45</sup> Here I just take *former* in English as an illustration of nonintersective modifiers. Note the Chinese counterpart of *former* should be *lao* ‘former’ instead of *yiqiande* ‘former’. Take for example:

- (i) a. Kelindun lao zongtong.  
Clinton former President  
‘Clinton is the former President.’  
b. \*Kelindun yiqian de zongtong.  
Clinton former DE President  
‘Clinton is the former President.’

It has been noticed (Sze-Wing Tang, personal communication) that some locative/temporal terms, as *shang* ‘upper’, *xia* ‘lower’, *zuo* ‘left’, *you* ‘right’, *yiqian/zhiqian* ‘before’, and *yihou/zhihou* ‘after’, cannot be used alone for inadequacy of referentiality. They may appear alone only when clear specification is given by the context.



### 3.4.2 Intersective and non-intersective: Larson (1998)

When introducing the Davidsonian event theory into the nominals, Larson (1998) claims that event nominals have two arguments, i.e., an individual argument and an event argument, and the difference between intersective and non-intersective modifiers lies in that the intersective modifier is predicated of the individual argument and the non-intersective modifier the event argument. In this spirit, the so-called non-intersective modifier is intersective as well. The difference of the two types of modifiers is displayed below:

(19) a.  $\exists e\lambda x[\text{Mod}_{\text{intersective}}(\underline{x}, C) \wedge N(e, \underline{x})]$

b.  $\exists e\lambda x[\text{Mod}_{\text{non-intersective}}(\underline{e}, C) \wedge N(\underline{e}, x)]$

In such a case, the semantic denotations of (17) and (18) can be rewritten as follows:

(17') a. Bush is an aged president.

b.  $\exists e[\text{aged}'(\underline{\text{bush}}', C) \wedge \text{presidency}'(e, \underline{\text{bush}}?)]$

(18') a. Bush is a former president.

b.  $\exists e[\text{former}'(\underline{e}, C) \wedge \text{presidency}'(\underline{e}, \text{bush}')] ]$

This claim is no doubt insightful, but one should be careful when treating the non-intersective modifiers. As discussed in the last subsection, the head nouns of non-intersective modifiers should be distinguished in terms of whether they are endowed with an event argument or a state argument. For convenience, here and

throughout, the non-intersective modifiers whose head nouns have a state argument are addressed as subjective as instantiated below:

$$(20) \Gamma e\lambda x [\text{Mod}_{\text{non-intersective}}(\underline{s}, C) \wedge N(\underline{s}, x)]$$

Let us look at the following examples:

(21) a. Ta Meiguo ren.

He America person

‘He is an American.’

b. \* $\Gamma e[\text{meiguo}'(ta', C) \wedge \text{ren}'(e, ta')]$  (intersective)

c. \* $\Gamma e[\text{LOC}(e, \text{meiguo}') \wedge \text{ren}'(e, ta')]$  (non-intersective)

d.  $\Gamma s[\text{LOC}(s, \text{meiguo}') \wedge \text{ren}'(s, ta')]$  (subjective)

Obviously, the subjective modifier is different from the other non-intersective modifiers in that it is predicated of a state argument rather than an event argument; it is different from the intersective modifier since the denotation of the modified nominals is the subset of the head noun rather than the subset of both the modifiers and the head noun.

Another point I would like to stress is the ability of the three kinds of modifiers of being predicates. The intersective modifier is predicative which has an innate scale structure and can be modified by a degree intensifier; Conversely, non-intersective modifiers, including the subjective ones, are attributive and incapable of being

predicates. It is considered that the non-intersective modifier does not have an inherent scale structure and cannot be modified by a degree intensifier. Take the following examples:

(22) a. Ta hen piaoliang. (intersective, predicative)

He very beautiful

‘He is very beautiful.’

b. \*Ta hen Shandong. (subjective, attributive)

He very Shandong

‘He is very Shandong.’

c. \*Zhe bu dianying hen yiqian de. (non-intersective, attributive)

This CI movie very former DE

‘This movie is a former one.’

The characteristics of the three types of modifiers can be generalized below:<sup>46</sup>

(23)

	denotation		element to be predicated of		ability of being predicate	
	subset of the modifier and the head noun	subset of the head noun	individual argument	event argument/state argument	predicative	attributive
intersective	√		√		√	
subjective		√		√		√
non-intersective		√		√		√

<sup>46</sup> Actually, subjective modifiers, as a subtype of non-intersective modifiers, should be collapsed with the non-intersective.

### 3.5 The semantic restriction on the modifiers

#### 3.5.1 The eligible modifiers of nominal predicates

##### 3.5.1.1 Intersective modifiers and nominal predicates

Intersective modifiers are prohibited to occur in the nominal predication construction irrespective of the types of the modifiee:

(24) a. \*Ta piaoliang ren. (Type A modifiee)

He beautiful person

‘He is a beautiful person.’

b. \*Ta piaoliang xuesheng. (Type B modifiee)

He beautiful student

‘He is a beautiful student.’

c. \*Zhe ge xuesheng piaoliang de. (Type C modifiee)

This Cl student beautiful DE

‘This student is beautiful.’

Since intersective modifiers are predicates of individuals, the observation above can be summarized as follows:

(25) Modifiers which are predicated of individuals are not capable of salvaging the nominal predication construction.

### 3.5.1.2 Non-intersective modifiers and nominal predicates<sup>47</sup>

It is observed that non-intersective modifiers are permitted to co-occur with nominal predicates irrespective of whether they possess a state argument or an event argument:

(26) a. Ta Xianggang ren. (Type A, locative)

He Hong Kong person

‘He is from Hong Kong.’

b. Ta chengli ren.

He city person

‘He is a citizen.’

c. Ta na ge cun de ren.<sup>48</sup>

He that Cl village DE person

‘He is from that village.’

d. Ta gudai ren. (Type A, temporal)

He ancient person

‘He was an ancient person.’

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<sup>47</sup> The representations of non-intersective and subjective modifiers are consistent in terms of the possibility of co-occurring with the nominal predicate, I may collapse the two into one in this subsection for simplicity.

<sup>48</sup> Sze-Wing Tang (personal communication) assumes that the occurrence of the modification marker *de* here plays a role in salvaging the sentence. But this assumption is not attested since the modification marker cannot save the sentence if the modifier is intersective as in the following examples: (i) \**Ta gao de xuesheng*. ‘He is a tall student.’ ; (ii) *Zhangsan yonggong de xuesheng*. ‘Zhangsan is a diligent student.’

e. Ta Tang chao ren.  
He Tang Dynasty person  
'He was a person of Tang Dynasty.'

f. Ta zhong shiji de ren.  
He Middle Ages DE person  
'He was a person of Middle Ages.'

g. Ta liushi niandai de ren.  
He sixty decade DE person  
'He was a person of sixties.'

(27) a. Ta daxue laoshi. (Type B, locative)  
he university teacher.  
'He is a university teacher.'

b. Ta waike yisheng.  
he surgery doctor  
'He is a surgeon.'

c. Ta Ligong Daxue de xuesheng.  
He polytechnic univeristy DE student  
'He is a student of the Polytechnic Univeristy.'

d. Ta najia gongsi de laozong.

He that company DE boss

‘He is the boss of that company.’

e. Kongzi Rujia de chuangshiren.

Confucius Confucianism DE founder

‘Confucius is the founder of Confucianism.’

f. Ta bashi niandai de daxuesheng. (Type B, temporal)

He eighty decade DE university student

‘He was a university student of the eighties.’

g. Han Yu Tang chao de zuojia.

Han Yu Tang Dynasty De zuojia

‘Han Yu was a writer of Tang Dynasty.’

(28) a. Ta Xianggang de ø. (Type C, locative)

He Hong Kong DE ø

‘He is from Hong Kong.’

b. Ta Meiguo lai de ø.

He America come DE ø

‘He is from America.’

c. Li Bai Tang Chao de  $\emptyset$ . (Type C, temporal)

Li Bai Tang Dynasty DE  $\emptyset$

‘Li Bai was in Tang Dynasty.’

b. Li Si liushi niandai de  $\emptyset$ .

Li Si sixty decade DE  $\emptyset$

‘Li Si is (a person) of sixties.’

As illustrated below, non-intersective modifiers occurring with nominal predicates are not restricted with those having temporal/locative imports:

(29) a. Ta niu ren. (Type A)

He cow person

‘He is awesome/an awesome person.’

b. Zhangsan zhiwu ren.

Zhangsan vegetative person

‘Zhangsan is a vegetable/a patient in a vegetative state.’

c. Zhe jian yifu maopai huo.

This Cl clothes fake product

‘This piece of clothes is a faker.’



(30) a. Wo linshi gong. (Type B)

Wo temporary worker

‘He is a temporary worker.’

b. Zhangsan linchuang yisheng.

Zhangsan clinic doctor

‘Zhangsan is a clinician.’

c. Ta daike laoshi.

He substitute teacher

‘He is a substitute (for the teacher).’

(31) a. Zhe ge ren gang lai de.

This Cl person just come DE

‘This person is a newcomer.’

b. Ta xue diannao de.

He learn computer DE

‘He is a student majoring in computer.’

c. Zhe ben shu wo mai de.

This Cl book I buy DE

‘This book is the one that I bought.’

Clearly, non-intersective modifiers are eligible to co-occur with nominal predicates

regardless of whether they are common nouns, deverbal nominals or empty categories.

As discussed above, non-intersective modifiers are different from intersective modifiers which are predicated of individuals, they apply to Davidsonian arguments rather than individuals. Along this line, the above observations can be summarized as below:

(32) Modifiers which are predicated of the Davidsonian argument are capable of salvaging the nominal predication construction.

This generalization can be incorporated with the claim in (25) and rewritten as follows:

(33) Modifier Presence Condition

Modifiers are capable of salvaging the copulaless nominal predication construction if and only if they are predicated of the Davidsonian argument; otherwise, they are banned.<sup>49</sup>

The implications of Modifier Presence Condition are in two fold: on the one hand, it states the licensing condition for the nominal predicates; on the other hand, it specifies the function of non-intersective modifiers, i.e., to spell out the Davidsonian argument

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<sup>49</sup> Note that this condition does not deny the possibility for the intersective modifier to save the copulaless nominal predication construction provided that an additional import is supplied to the intersective modifier explicitly or contextually which enables the modifier to be predicated of the Davidsonian argument. Take the evaluative nominal *hao ren* 'good person' for example, besides the intersective reading, the modifier *hao* 'good' also expresses the evaluation of the speaker to the person concerned. Following Speas and Tenny (2003) and Tenny (2006), evaluation also has its projection which takes the proposition as its complement. Since the Davidsonian argument is actually the instantiation of a nominalized proposition, the evaluative reading implies the existence of an Eva(luative) predicate which takes the Davidsonian argument as its complement. In such a case, *ta hao ren* 'he is a good person' would be a perfect sentence though it is an intersective modifier.

of the nominal predicate. As proposed by the Davidsonian Argument Visibility Hypothesis, the articulation of the Davidsonian argument is the indispensable condition for the grammaticality of a sentence, the presence of non-intersective modifiers would supply a sufficient condition to satisfy the requirement under discussion.

### **3.6 The syntactic structure of the modified nominal predicative construction**

#### 3.6.1 N-modifier vs. D-modifier: Larson (1998; 2000 et seq.)

In his serial works (Larson 1998; 2000, et seq.), Larson distinguishes two types of modifiers from the syntactic perspective: N(oun)-modifier vs. D(eterminer)-modifier.

His main points are summarized as follows:

Syntactically, N-modifier is closer to the modifiee than D-modifier, i.e., N-modifier is in the inner modification domain and D-modifier is in the outer modification domain. The former is generally understood as NP modifiers and the latter as reduced relatives.

Semantically, the Davidsonian event analysis is introduced to adjectival modification. The semantics of common nouns is relativized to events and adjectives are analyzed as predicates, the adjectives may be associated to individual  $x$  or event argument  $e$ , and an event quantifier is introduced.

N-modifiers are taken as i-level predicates and D-modifiers as s-level predicates, and they are bound by different event quantifiers à la Chierchia (1995), i.e., generic quantifier  $\Gamma$  or existential quantifier  $\exists$ , respectively. The configuration is schematized as follows:

$$(34) [{}_{\text{DP}} \exists e [ \text{AP} [ \Gamma e [ \text{AP} \text{ N } ] ] \text{AP} ] ]$$

**s-level**
**i-level**
**s-level**

### 3.6.2 Modifiers in Mandarin nominal predication

Despite the merits of the above claim, it is not applicable to the Mandarin modified nominal predicates. As observed below, the modified nominals in English are not allowed to appear without the support of the article:

- (35) a. Bush is a/the president.  
 b. Bush is president.  
 c. Bush is an aged president.  
 d. \*Bush is aged president.

As is observed in (35a, b), the article is optional when the predicate nominal is bare, while the article is obligatory when the modifier *aged* is present.<sup>50</sup> Hence, it is convincing to restrict the English adjectival modification to the domain of DP as

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<sup>50</sup> Note that the optionality of the article before the predicate nominal is not observed for all predicate nominals (Stowell 1981; 183). At least, the opposition is observed here between the optional and obligatory occurrence of the article before the bare predicate nominal and the modified predicate nominal. Besides, this does not affect the DP analysis to modified nominal phrases considering that the article is required obligatorily before modified predicate nominals.

Larson does, irrespective of whether the modified nominal is an argument or a predicate. However, Mandarin does not share the same picture with English with respect to the modified nominal predicates in the copulaless nominal predication construction. See the following examples:

(36) a. Ta Zhongguo ren.

He China person

‘He is Chinese.’

b. \*Ta zhe/yi ge zhongguo ren.

He this/one Cl China person

‘He is this/a Chinese.’

c. Wo Ligong Daxue de xuesheng.

I polytechnic university DE student

‘I am a student of the Polytechnic University.’

d. \*Wo zhe/yi ge Ligong Daxue de xuesheng.

I this/one Cl polytechnic university DE student

‘I am this/a student of the Polytechnic University.’

Different from the modified nominal predicates in English, the modified nominal predicates in Mandarin are not allowed to co-occur with the determiners. In other words, the determiner is obligatory for the English modified nominal predicate while

it is not allowed to co-occur with the Mandarin nominal predicate. Thus, it is dubious to follow the English practice and classify the modifiers into the domain of N and D.

Recall Larson's introduction of Davidsonian event theory to adjectival modification. He argues that the adjective is predicated of either an individual argument or an event argument. In conjunction with my proposal in Chapter 1 that the predicate is decomposed into two sub-predicates where a lexical predicate is predicated of an individual argument and a functional predicate  $\nu$  is predicated of an eventuality argument, I assume that the modification should be classified in terms of the argument with which the modifiers are associated. To be specific, when the modifier is associated with the individual argument, the modification is in the N domain; when the modifier is associated with the eventuality argument, the modification is in the  $\nu$  domain. Correspondingly, the modifiers of predicate nominals are to be addressed as N-modifiers and  $\nu$ -modifiers in terms of whether they fall into the N-domain or the  $\nu$ -domain. In line with Larson (1998), I claim that N-modifiers are in the inner domain and  $\nu$ -modifiers are in the outer domain, and the configuration of modified nominal predicates is schematized as follows:<sup>51</sup>

$$(37) [\nu_P \exists e \ [ \underline{AP} \ [_{NP} \Gamma e \ [ \underline{AP} \ N ] ] ] ]$$

$\uparrow$   
 $\nu$ -modifier

$\uparrow$   
 N-modifier

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<sup>51</sup> AP here is a cover term for all kinds of modifiers which are not restricted to adjectival phrases. Besides, the postnominal AP in the schema is deleted since the postnominal modifier is not allowed in Mandarin.

This proposal is empirically supported by the following examples:

- (38) a. zhe ge xuexiao de nianqing laoshi (v-modifier<N-modifier)  
this Cl school DE young teacher
- b. \*nianqing de zhe ge xuexiao de laoshi (N-modifier< v-modifier)  
young DE this Cl school DE teacher
- (39) a. qunian de da dizhen (v-modifier<N-modifier)  
last year DE big earthquake
- b. \*da de qunian de dizhen (N-modifier< v-modifier)  
big DE last year DE earthquake
- (40) a. xiandaihua de mimi wuqi (v-modifier<N-modifier)  
modern DE secret weapon
- b. \*mimi de xiandaihua wuqi (N-modifier< v-modifier)  
secret DE modern weapon

### 3.6.3 Predicate Modification and the syntax of modified nominal predication

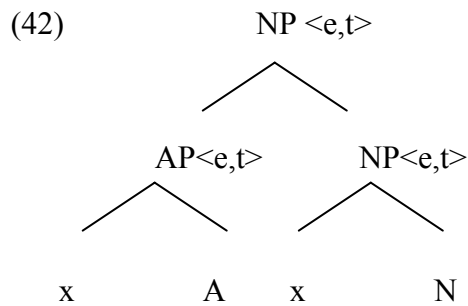
Following Heim and Kratzer (1998), when two sisters are of the same semantic type, then the mother node is interpreted as a conjunction of its two daughters, this operation is taken as Predication Modification:

(41) Predication Modification

For  $\alpha \in D_{\langle e, \sigma \rangle}$ ,  $\beta \in D_{\langle e, \sigma \rangle}$  and  $\gamma$  s.t.  $\gamma$  immediately dominates both  $\alpha$  and  $\beta$

$[[\gamma]] = \lambda x. [[\alpha]](x)$  and  $[[\beta]](x)$

According to Predication Modification, the intersective modifier is of the same semantic type with the head noun, i.e.,  $\langle e, t \rangle$ , and both of them are predicated of an entity  $x$ . In such a case, the intersective modified noun phrase is a conjunction of the modifier and the head noun. See the diagram below:<sup>52</sup>



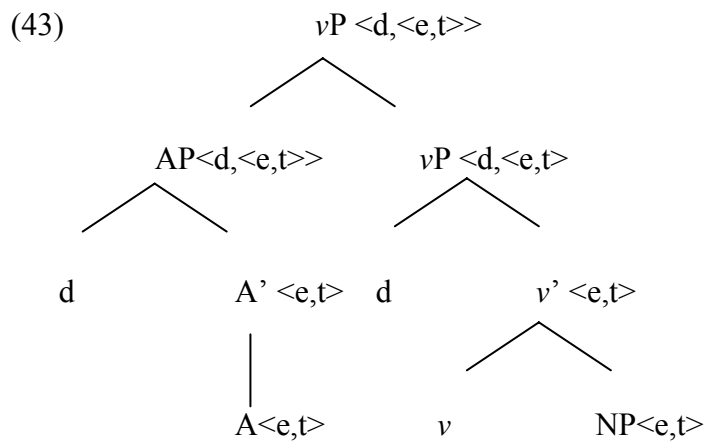
For non-intersective modifiers, the Predication Modification rule cannot be applied according to the classical semantics since the semantic type of the modifier and that of the head noun are different: the former is  $\langle e, t \rangle, \langle e, t \rangle$  and the latter is  $\langle e, t \rangle$ . In such a case, Functional Application rule should be applied. But if Larson's (1998; 2000) view is adopted, non-intersective modifiers will also be taken as intersective and the only distinction between non-intersective and intersective modifiers lies in that the

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<sup>52</sup> 'x' here refers to the entity/individual variable.

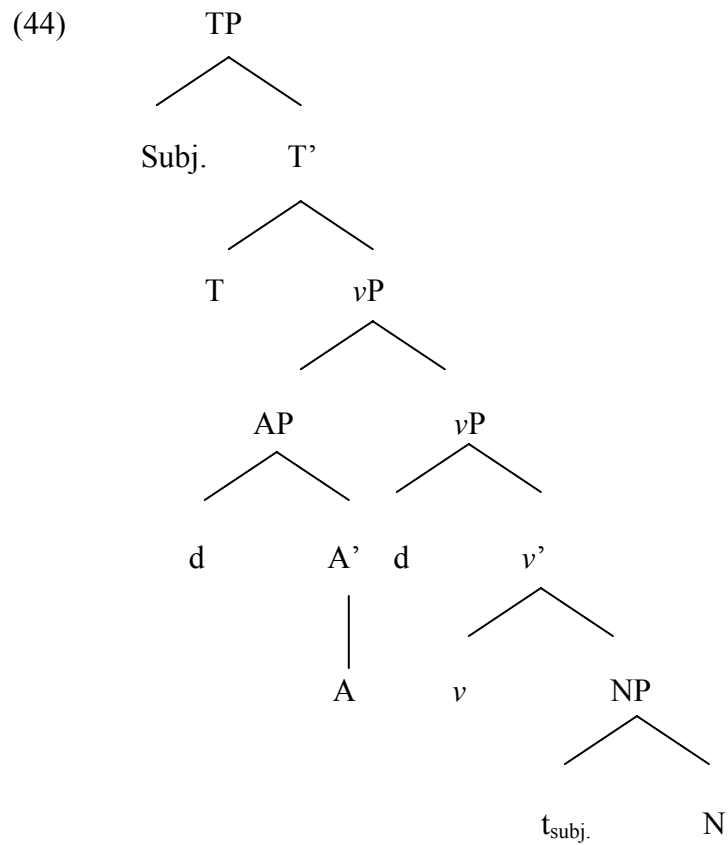


arguments they are predicated of are events rather than entities. If that is the case, Predication Modification can be applied, and their semantic types should be reanalyzed as  $\langle d, \langle e, t \rangle \rangle$  instead of  $\langle e, t \rangle$ . The only syntactic distinction between non-intersective and intersective modifiers is that the sister node of non-intersective modifiers is  $\nu P$  other than NP, which is taken as the outer modification in Larson's sense. See the diagram below:



Let us turn to the modified nominal predication construction. As proposed in Chapter 1, the Davidsonian Argument Visibility Hypothesis is to be observed to generate a grammatical sentence. Considering that neither the lexical predicate phrase NP nor the eventuality predicate phrase  $\nu P$  has the ability to make the Davidsonian argument visible, we should have recourse to other devices to satisfy this requirement. If our analysis is on the right track, then the occurrence of the non-intersective modifier will solve this problem. Given that the non-intersective modifier located at the sister node

of  $vP$  is applied to the Davidsonian argument, the Davidsonian argument induced by the non-intersective modifier should be co-indexed with the Davidsonian argument to be predicated of by  $v$ . The syntactic derivation of the construction will be as follows:

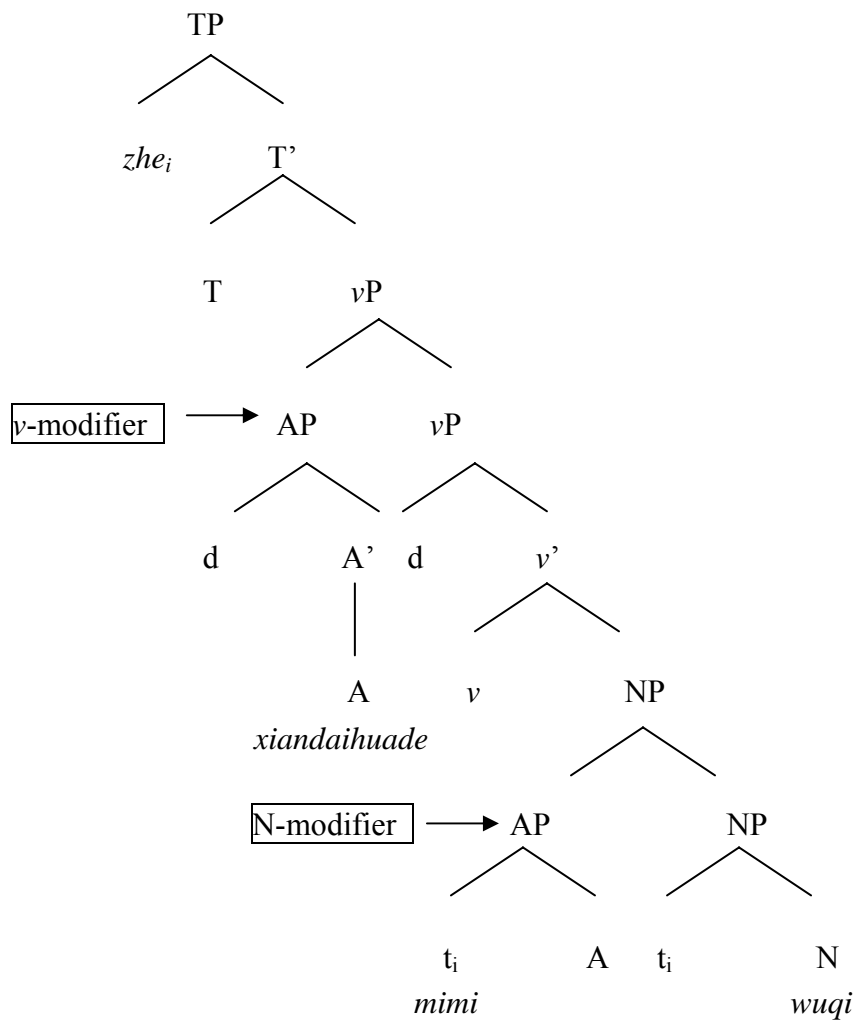


Let us look at the following example which clearly indicates the positions of intersective and non-intersective modifiers and also the specification of the Davidsonian argument:

(45) Zhe xiandaihua de mimi wuqi.<sup>53</sup>

This modern DE secret weapon

‘This is a kind of modern secret weapon.’



<sup>53</sup> Following Predication Modification rule, both N and its modifier A are considered as predicates. It is proposed that the property-denoting N and its N-modifier are predicated of the same entity which is supposed to move to SpecTP, leaving its trace at its base position.

### 3.7 The predictions

#### 3.7.1 Ambiguity of modifiers

Larson (1998) claims that most modifiers are ambiguous between intersective and non-intersective readings as illustrated in his famous example:

- (46) a. Olga is a beautiful dancer.  
b. ‘Olga is a dancer and Olga is beautiful’  
c. ‘Olga is beautiful as a dancer’

*Beautiful* in example (46a) has two readings: one applies to the individual *Olga* (46b) and one applies to the event argument ‘dancing’ (46c). The same phenomena are observed in Mandarin Chinese. Consider the following example:

- (47) lao gongren  
old worker  
a. ‘aged worker’  
b. ‘be a worker for a long time’

The two interpretations are formalized as below:

- (48) a. ‘aged worker’  
old’ (x) ∧ worker’ (x)

- b. ‘be a worker for a long time’

old’/long-time’(e) ∧ working’(e)

It is shown that the modifier in (48a) is predicated of the individual while that in (49b) is predicated of the event argument. Following Modifier Presence Condition, only those applying to the Davidsonian argument are eligible to license the nominal predicate in the nominal predication construction. It is thus predicted that only the second reading is allowed in the copulaless nominal predication construction:

(50) Ta lao gongren.

He old worker

\*‘He is an aged worker.’

‘He has been a worker for a long time.’

The comparison above is illustrated more clearly in the following pairs of sentences:

(51) a. Ta lao gongren, wo xin gongren.

He old worker I new worker

‘He is an old worker, and I am a new worker.’

b. \* Ta lao gongren, wo nianqing gongren.

He old worker I young worker

‘He is an old worker, and I am a young worker.’

When *lao gongren* ‘old worker’ is compared with *xin gongren* ‘new worker’, it is

forced to be interpreted as ‘be a worker for a long time’ since *xin gongren* ‘new worker’ means ‘a person who has been a worker recently’; When compared with *nianqing gongren* ‘young worker’, *lao gongren* ‘old worker’ is interpreted as ‘aged worker’. As observed above, only the interpretation ‘be a worker for a long time’ is available when *lao gongren* ‘old worker’ occurs in the copulaless nominal predication construction (51a). The above example is compatible with our generalization that only non-intersective modifiers which are predicated of the Davidsonian argument can license the nominal predication construction for the reason that they can make the Davidsonian argument visible. Syntactically, they are modifiers of vP rather than NP since NP is predicated of the individual argument rather than the Davidsonian argument. The conjunction of non-intersective modifiers and NPs would violate the Predication Modification rule due to the mismatch of their semantic types. Let us see more examples:

(52)     gao    ren  
           tall  person

- a. ‘tall person’
- b. ‘a person who has expertise on something’

If my proposal is on the right track, it would be expected that only the second reading is available:

(53) Ta gao ren.

He tall person

- a. \*‘He is a tall person.’
- b. ‘He is a person who has expertise on something.’

Furthermore, it is observed that the non-intersective modifier can even salvage a nominal predication construction whose predicate is an intersectively modified nominal:

(54) a. \*Lin Qingxia mei ren.

Lin Qingxia beautiful person

‘Lin Qingxia is a beauty.’

- b. Lin Qingxia da mei ren.

Lin Qingxia great beautiful person

‘Lin Qingxia is a great beauty.’

*Mei* ‘beautiful’ in (54a) is an intersective modifier applying to the subject *Lin Qingxia*, which is incapable of salvaging the nominal predicate *ren* ‘person’. *Da* ‘big/great’ may be encoded in two ways as suggested by its gloss: (i) *da* is intersective when it is interpreted as ‘big’, in this case, the sentence (54b) will be interpreted as ‘Lin Qingxia is big and Lin Qingxia is beautiful’; (ii) *da* is non-intersective when it is encoded as ‘great’, in such a case, the interpretation of (54b) is ‘Lin Qingxia is a great beauty’

rather than ‘Lin Qingxia is great and Lin Qingxia is a beauty.’ Clearly, *da* in (54b) is a non-intersective modifier whose occurrence salvages the sentence successfully.

### 3.7.2 Non-intersective modifiers in disguise

Following Modifier Presence Condition, only modifiers applying to the Davidsonian argument can co-occur with the nominal predicates in the nominal predication construction. While the following examples seem to be contradictory to the above claim:

(55) a. Ta xin ren. (non-intersective)

He new person

‘He is a beginner/newcomer.’

b. Zhe xin shu. (intersective)

This new book

‘This is a new book.’

The modifier *xin* ‘new’ in the above examples is ambiguous in meaning, it is nonintersective in *xin ren* ‘beginner/newcomer’ since it is not meant ‘a new person/a person who is new’ but ‘a person who newly comes’, but it seems intersective in *xin shu* ‘new book’. Following Modifier Presence Condition, it is expected that the modified noun phrase *xin shu* ‘new book’ is illegitimate to be a predicate without the support of the copula. However, the above example seems to contradict to our



expectation. As a matter of fact, the above examples are by no means exceptional and a considerable amount of examples are at hand:

(56) a. Zhe ganjing yifu.

This clean clothes

‘These are clean clothes.’

b. Na re niunai.

That hot milk

‘That is hot milk.’

c. Zhe xian guozhi.

This fresh juice

‘This is fresh juice.’

These adjectives appear no different from the other intersective modifiers, but under close examination, one could find that their interpretations are distinctive from the real intersective modifier. This could be shown from the following two points:

(i) An implicit verb could be added to the modifiers under discussion, or the modifier could have a verbal counterpart:

(57) a. Zhe xin shu.<sup>54</sup>

This new book

‘This is a new book.’

b. Zhe xin mai/chuban/xie de shu.

This new buy/publish/write DE book

‘This is a newly bought/published/written/printed book.’

(58) a. Zhe xian guozhi.

This fresh juice

‘This is fresh juice.’

b. Zhe xian zha de guozhi.

This fresh squeeze DE juice

‘This is freshly squeezed juice.’

(59) a. Zhe ganjing yifu.

This clean clothes

‘These are clean clothes.’

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<sup>54</sup> According to *Xindai Hanyu Cidian (The Contemporary Chinese Dictionary)*, *xin shu* ‘new book’ has two interpretations: (i) a brand new book; (ii) a book which is to be published or newly published. Of course, I would not deny the first interpretation ‘a brand new book’, but only the second reading is available when it occurs in the copulaless nominal predication construction. For instance, when *zhe xin shu* ‘this is a new book’ is uttered, the sentence sounds weird to be interpreted as ‘this is a new book (rather than a old book)’. Actually *shu* ‘book’ is an incremental argument, even the first reading of *xin shu* ‘new book’, i.e., a brand new book, can be paraphrased as ‘a book which is newly bought or printed’. Therefore, both readings of *xin shu* ‘new book’ can be regarded as having an implicit verb.

b. Zhe xi ganjing de yifu.

This wash clean DE clothes

‘These are cleaned clothes.’

(60) a. Na re (guo) de niunai.<sup>55</sup>

That heat ASP<sub>exp</sub> DE milk

‘That is heated milk.’

In the above examples, an implicit verb could be recovered and the so-called intersective modifier of the nominal predicate is actually the adverbial or complement of the implicit verb. Following Davidson (1967), among many others, the adverbial or complement applies to the event argument, I assume that the intersective modifiers in the above sentences are non-intersective which are not predicated of the nominal, instead it is predicated of the event argument.

Semantically, I assume that there is a phonologically empty predicate  $\Delta$  occurring in the construction whose interpretation is contextually determined. The modified NPs in the above sentences thus have the following semantic interpretations:

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<sup>55</sup> Note that *re* ‘hot’ in Chinese is a homonym with three interpretations: (i) to make hot, as in *re fan* ‘make the food hot’; (ii) to become hot as in *fan re le* ‘the meal becomes hot’; (iii) to be hot, as in *fan shi re de* ‘the meal is hot’. The three types of *re* are distinctive in categorial status depending on their syntactic positions: causative, inchoative and stative. Of course, the modifier *re* in *re nai* ‘hot milk’ should be encoded as stative. But attention should be paid that the state of ‘being hot’ cannot be realized automatically, on the contrary, the state must be achieved via some action. That is to say, the state of ‘being hot’ is the result of ‘making hot’ and the state of ‘being hot’ implicates the existence of an activity ‘making hot’. In such a case, the modifier *re* ‘hot’ in the phrase *re nai* ‘hot milk’ is syntactically considered as the complement of the implicit causative verb *re* ‘to make hot’. Since the causative *re* and the stative *re* are of the same forms, it is hard to spell out the two simultaneously as the other verb complement phrases like *xi ganjing* ‘wash to be clean’ do due to the phonological constraints. The experiential/perfective aspect marker *guo* is hence substituted for the complement *re* ‘hot’.

(57')a. Zhe xin shu.

This new book

'This is a new book.'

b.  $\exists e[\text{Con}(e, \text{book}') \wedge \Delta(e, \text{book}')][\text{new}'(e, C)]$

(58')a. Zhe xian guozhi.<sup>56</sup>

This fresh juice

'This is fresh juice.'

b.  $\exists e[\text{Con}(e, \text{juice}') \wedge \Delta(e, \text{juice}')][\text{fresh}'(e, C)]$

(59')a. Zhe ganjing yifu.

This clean clothes

'These are clean clothes.'

b.  $\exists e[\text{Con}(e, \text{clothes}') \wedge \Delta(e, \text{clothes}')][\text{clean}'(e, C)]$

(60')a. Na re (guo) de niunai.

That heat ASP<sub>exp</sub> DE milk

'That is heated milk.'

b.  $\exists e[\text{Con}(e, \text{milk}') \wedge \text{heating}'(e, \text{milk}')][\text{hot}'(e, C)]$

The discussions above suggest that the implicit verb is like a hidden reduced relative clause and the modifiers under discussion are to modify the event argument of the

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<sup>56</sup> Sze-Wing Tang (personal communication) wonders why the empty verb cannot be recovered in *xianhua* 'flower'. I assume that the *xian* in *xian guozhi* 'freshly squeezed juice' and the *xian* in *xianhua* 'flower' are different in that the former is more like an adverb meaning 'freshly/newly' while the latter is an adjective with the meaning of 'fresh'. The two *xians* can thus be taken as homonyms.

relative clause. Different from the non-intersective modifiers discussed in Section 3.3 which modify the Davidsonian argument of the matrix clause, the modifiers at issue are used to modify the event argument of the relative clause.

The syntactic structure of the modified NP is given below, and the irrelevant parts are omitted for simplicity.<sup>57</sup>

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<sup>57</sup> Sze-Wing Tang (personal communication) poses three questions concerning the syntactic structure: (i) Why *de* is omitted in some examples? (ii) Can the *pro* be overt? (iii) If AP is in a full clause, why can't the adjective be modified by a degree adverb as in \**zhe hen xin shu/zui xin shu* 'this is a very new book/the newest book'?

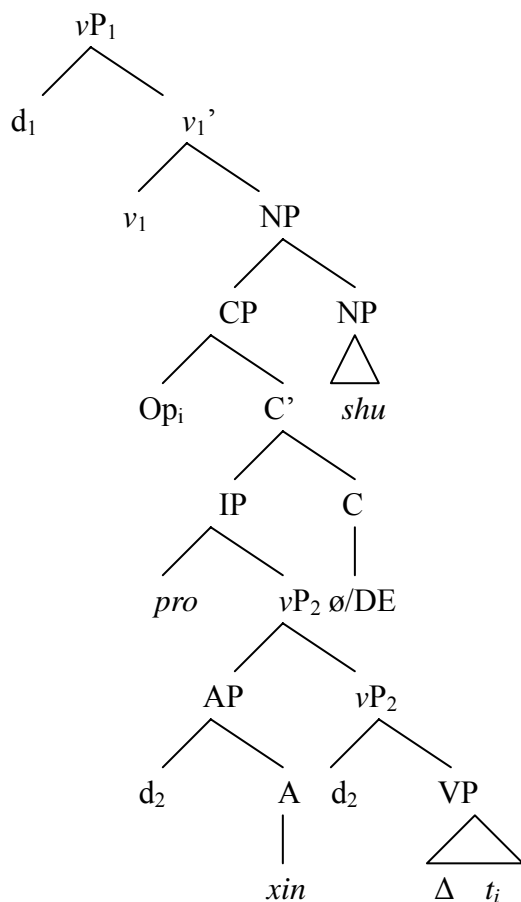
As for question (i), I would say that *de* is actually optional in all the clauses when the implicit verb is not recovered, that is to say, *de* can be phonologically realized. But it tends to be omitted in colloquial language maybe for the sake of economy.

I would give a negative answer to question (ii) as for whether the *pro* can be overt as exemplified by the sentences provided by Sze-Wing Tang (personal communication): a. \**zhe [laoban xian  $\emptyset$ ] de guozhi* 'this is the juice [the boss newly  $\emptyset$ ]; b. \* *zhe [mama  $\emptyset$  ganjing] de yifu* 'this is the clothes [mum  $\emptyset$  clean]'. It seems that when the subject is realized the implicit verb has to be recovered. I am not quite sure whether this is caused by phonological constraint. But there is such a possibility that the implicit verb might be a passive one as suggested by its English gloss. If this assumption is on the right track, it comes naturally that the subject cannot be recovered since the agent of the passive verb has been suppressed and the subject should be the patient which has been extracted from the relative clause. To avoid complexity, I would keep the structure of the relative clause as it displays here and would not change the voice of the relative clause into passive.

As for question (iii), I would say that the sentence *zhe zui xin (de) shu* 'this is the newest book' is acceptable when *de* is spelt out, as proposed by Dingxu Shi (2002b) that *de* must be articulated when a degree intensifier restricting the adjective. Besides, the *xin* 'new' in *xin shu* 'newly bought/printed/published book' is actually an adverb modifying the implicit verb and *hen* 'very' cannot appear even when the verb is recovered as in \**hen xin chuban de chu* 'newly published book'.

Sze-Wing Tang (personal communication) also puts forward an alternative concerning the status of the light verb phrase  $vP_2$  in the relative clause. He assumes that perhaps  $vP_2$  is not a "clause" but a "compound" underlyingly. I do not think that this alternative is possible considering that the word orders with regard to the verb and its arguments (including the subject and the object) in a compound and a clause are different. For instance, the VO word order in a clause will be converted into OV in a compound as illustrated by the following pair: *xiuli qiche* 'repair a car' (the word order in a clause) vs. *qiche xiuli* 'car repairing' (the word order in a compound). Sze-Wing Tang (personal communication) does not agree to my reply to the status of  $vP_2$  and argues that *shu* 'book' is not part of the compound. But if my answer to question (ii) is correct, then *shu* 'book' should be considered as the part of the compound given that it is originally generated as the object of the implicit verb though it is extracted to the matrix clause afterwards.

(61) ...



Suppose that the predicate of the matrix clause is the NP *shu* ‘book’ which takes a reduced relative clause modifier. As for the relative clause in Mandarin Chinese, there are two syntactic treatments: the left-branching complementizer approach which considers the fact that C element is generally located in the clause final position in Mandarin Chinese; the antisymmetry approach proposed by Wu (2000) and Simpson (2002) based on Kayne’s (1994) antisymmetry theory.<sup>58</sup> The left-branching approach

<sup>58</sup> The antisymmetry approach is also called as D CP analysis given that it takes the modified nominal as a DP and the relative clause headed by C is its CP complement. According to this analysis, DP is headed by the functional category *de* in Chinese and CP is headed by a null element. The head noun is base-generated in the complement clause of C, i.e., TP and will move to the Spec of CP, the remnant of TP will ultimately move to SpecDP. Actually, neither the antisymmetry approach nor the left-branching approach will affect our analysis to the adjectival modifier under discussion since what they modify are

is adopted here and C is put in the head-final position. In this structure, the whole CP is supposed to be adjoined to NP and an operator at SpecCP is used to close off the variable in the CP. The relative clause CP is headed by the complementizer *de* which is not phonologically spelt out.<sup>59</sup> To work out the restricting domain of the modifier under discussion, the sentential complement of CP, namely, IP, has to be further analysed. Suppose that the complement IP behaves similarly to the matrix IP whose subject is a small *pro* and its lexical predicate is a VP formed by an implicit verb and a trace bound by the operator. Like the matrix predicate, I assume that the predicate of the restrictive clause is also decomposed into two parts: besides the lexical predicate VP, there still exists a functional predicate *v* which is predicated of the event argument  $d_2$  (to distinguish it from the Davidsonian argument in the matrix clause  $d_1$ ). Since the modifier *xin* ‘new’ is predicated of the event argument like the functional predicate *v* does, the two will be of the same semantic type. In such a case, AP and *v*P will be supposed to be of sisterhood following Predication Modification. The fact that the modifier is to restrict the event argument of a relative clause whose verb is not phonologically spelt out makes it hard to determine the property of the modifier.

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CP internal elements. In other words, their restricting domain is within CP, to be exact, within IP/TP. While considering that the head noun of the clause is a predicate and it never allows the occurrence of D element in the prenominal position, e.g. *\*xin zhe ben shu* ‘new this book’, *\*xian zhe bei guozhi* ‘fresh this cup of juice’, we adopt the left-branching approach here.

<sup>59</sup> Notice that *de* located at C is optional when the implicit verb is not spelt out but has to be articulated when the implicit verb is realized. For example, *zhe xin shu* ‘this is a new book’—*zhe xin mai de shu* ‘this is a newly bought book.’ It still remains a puzzle with regard to the occurrence of *de* here.

(ii) The head noun is either an incremental argument of an implicit verb or a nominal undergone a change of state.

Actually, most of the head nouns are similar to incremental arguments as *shu* ‘book’ in *xin shu* ‘new book’ and *guozhi* ‘juice’ in *xian guozhi* ‘fresh juice’, they are elements created via the action of the implicit verbs. Thus, if the nominal cannot be created or easily affected, the sentence will be ruled out:

(62) a. \*Zhe xin shan.<sup>60</sup>

This new mountain

‘This is a new mountain.’

b. \*Na jiu taiyang.

That old sun

‘That is an old sun.’

Since the nominal predicates *shan* ‘mountain’ and *taiyang* ‘sun’ cannot be created or affected easily in terms of common sense, the implicit verb cannot be recovered. In such a case, the modifier is intersective and applies to the nominal directly. For the reason that no Davidsonian argument is to be predicated of, the modified noun phrases discussed above are not capable of being predicates without the support of the

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<sup>60</sup> Note *xinshan* is also a name of place in Malaysia. When it is a proper noun, the sentence is acceptable as we discussed in Chapter 1. But *xin shan* ‘new mountain’ here is used as a modified NP. Attention should also be paid to the fact that mountain can also be created or built in some special cases, as in *zai zao xiumei xin shanchuan* ‘rebuild the beautiful new mountains and rivers’. Since this occurs rarely, people will not take this as common sense. Still, the sentence sounds rather weird. I would like to thank Sze-Wing Tang for pointing this to me.



copula.

Due to the reasons listed above, I claim that the modifiers in the above sentences are non-intersective in disguise rather than intersective. The other claim resulted from the above observation is that the intersective modifier expresses the defining property of the individual while the non-intersective modifier the transient one. This claim conforms to the configuration (32) that N-modifiers are i-level predicates and D-modifiers are s-level predicates (Larson 1998).

### 3.7.3 The constraints on the verbal modifier<sup>61</sup>

In the above discussion, it has been observed that some seemingly intersective modifiers are actually non-intersective ones which correspond to the adverbial or verbal complement of some implicit verb. In what follows, I will argue that the occurrence of the adverbial or complement is obligatory for the verbal modifiers. Let us consider the following examples:

(63) a. \*Zhe mai de shu.

This buy DE book

‘This is a bought book.’

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<sup>61</sup> Since what is discussed here is the semantic constraint imposed on the modifier, the syntactic operation is ignored.

b. Zhe xin/gang/cai mai de shu.

This newly/just/jus buy DE book

‘This is a newly bought book.’

(64) a. \*Zhe xi de yifu.

This wash DE clothes

‘These are washed clothes.’

b. Zhe xi ganjing de yifu.

This wash clean DE clothes

‘These are clean clothes.’

c. Zhe xi guo de yifu.

‘This wash ASP<sub>exp</sub> DE clothes

‘These are washed clothes.’

d. Zhe xi hao de yifu.<sup>62</sup>

This wash good DE clothes

‘These are washed clothes.’

It is observed that the verbal modifiers in the above examples cannot be bare and have to be modified by adverbs or verbal complements. In the spirit of Davidson (1967), among many others, adverbs or verbal complements are predicated of the event

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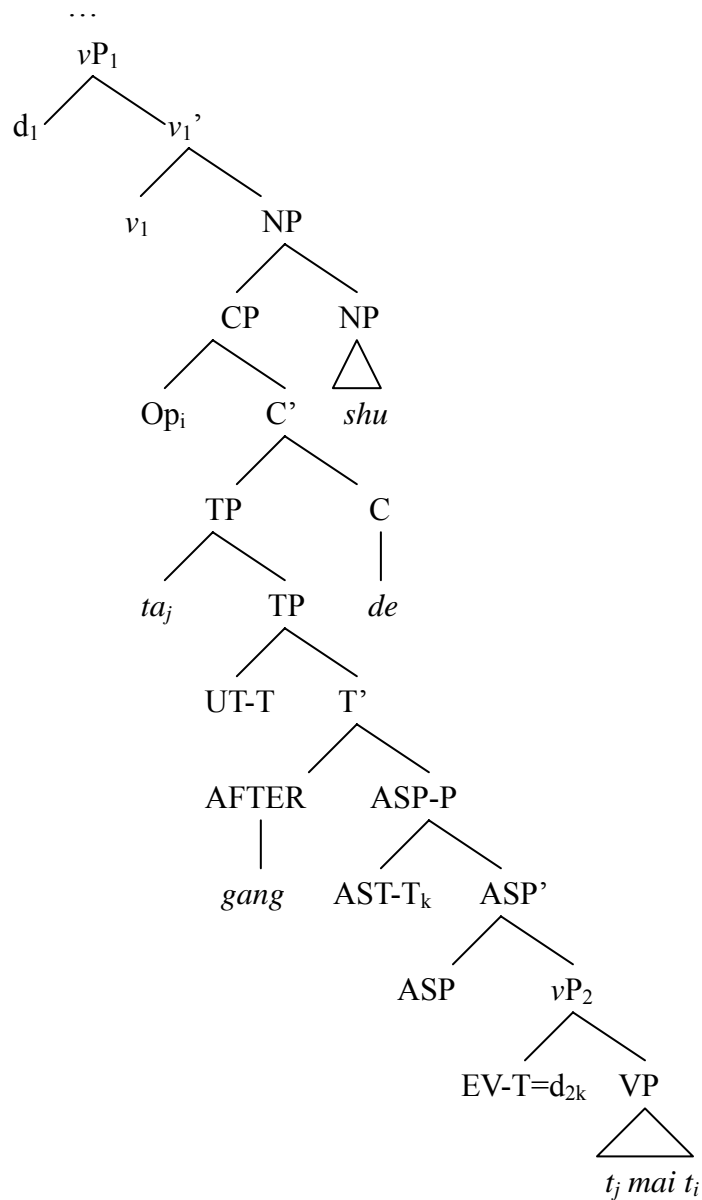
<sup>62</sup> Note the verbal complement *hao* cannot be interpreted as ‘good’. It is used to denote the completion of the action *xi* ‘wash’, and is thus similar to *wan* ‘finish’ or the experiential/perfective Aspect marker *guo*.

argument. By the application of these elements, the Davidsonian argument is induced and the ungrammatical sentences will be salvaged consequently.

Syntactically, the construction with verbal modifiers can be treated the same way as the construction with disguised intersective modifiers as we discussed in 3.7.2, the verbal modifier can be taken as a relative clause. The differences between the two constructions lie in two points: (i) the articulation of the verb of the restrictive clause; (ii) the node where the modifier is adjoined to.

Let us take the sentence *zhe ta gang mai de shu* ‘this is the book he just bought’ for example. As analysed in 3.7.2, *ta gang mai de* ‘he just bought’ is a relative clause modifying the nominal predicate *shu* ‘book’ and the modified NP is syntactically represented as an NP with a CP adjunct. As what we discussed previously, the Spec of CP is occupied by an operator binding the trace in the sentential complement TP *ta gang mai t* ‘he just bought’, and the head of CP is realized as *de*. The difference from the construction we talked about in 3.7.2 is that the time adverb which is required obligatory is predicated of the time argument UT-T rather than the event argument following our analysis in Chapter 2. The Davidsonian argument of the relative clause, i.e., the event time is covalued with the time argument AST-T, and the Tense predicate *ganggang* indicates that the AST-T is after the UT-T. The syntactic structure of the sentence is displayed as follows:

(65)



### 3.8 The summary

This chapter examines the nominal predication construction whose predicates are modified noun phrases. Modifiers may be roughly divided into two types: intersective and non-intersective. According to Larson (1998), both types of modifiers are predicative in nature, the distinction between them lies in that intersective modifiers are predicated of individual arguments while non-intersective ones are predicated of

event arguments. Based on this dichotomy, it is observed that only non-intersective modifiers may salvage an ungrammatical nominal predication construction while intersective ones cannot. Given that non-intersective modifiers are predicated of event arguments, it follows that the event argument has to be visible in order to be operated on and the visibility of the event argument ultimately leads to the grammaticality of the nominal predication construction. Discussions on different kinds of modifiers support our assumption.

## CHAPTER 4 THE PREDICATIVE POSSESSIVE NOMINAL CONSTRUCTION

### 4.1 Introduction

It is argued in the previous chapters that the spell-out of the spatio-temporal argument/event argument is crucial for the nominal predication construction. In this chapter, I would like to examine the predicative possessive phrases and explore the relationship between possession and the realization of the spatio-temporal argument and see if the Davidsonian argument visibility hypothesis applies to the predicative possessive nominal construction.

### 4.2 Possessors, relational nouns and nominal predication

It is observed that possessors can salvage the nominal predication construction in Mandarin Chinese. See the following sentences:

(1) a. \*Zhangsan mama.

Zhangsan mother

Literal: 'Zhangsan is mother.'

b. Zhangsan wo/ni/ta mama.

Zhangsan my/your/his mother

'Zhangsan is my/your/his mother.'

(2) a. \*Zhangsan jiuma.

Zhangsan aunt

Literal: 'Zhangsan is aunt.'

b. Zhangsan wo jiuma.

Zhangsan my aunt

'Zhangsan is my aunt.'

(3) a. \*Zhangsan pengyou.

Zhangsan friend

Literal: 'Zhangsan is friend.'

b. Zhangsan womende/nimende/tamende pengyou.

Zhangsan our/your/their friend

'Zhangsan is our/your/their friend.'

(4) a. \*Zhangsan linju.

Zhangsan neighbour

Literal: 'Zhangsan is neighbour.'

b. Zhangsan womende/nimende/tamende linju.

Zhangsan our/your/their neighbour

'Zhangsan is our/your/their neighbour.'

(5) a. \*Zhangsan xiaozhang.

Zhangsan principal

‘Zhangsan is a principal.’

b. Zhangsan womende/nimende/tamende xiaozhang.

Zhangsan            our/your/their            principal

‘Zhangsan is our/your/their principal.’

(6) a. \*Zhangsan xuesheng.

Zhangsan student

‘Zhangsan is a student.’

b. Zhangsan wode/nide/tade xuesheng.

Zhangsan    my/your/his    student

‘Zhangsan is my/your/his student.’

(7) a. \*Zhe shu.

This book

‘This is a book.’

b. Zhe Zhangsan de shu.

This Zhangsan DE book

‘This is Zhangsan’s book.’



(8) a. \*Na fangzi.

That house

‘That is a house.’

b. Na Lisi de fangzi.

That Lisi DE house

‘That is Lisi’s house.’

c. Na Lisi jia de fangzi.

That Lisi home DE house

‘That is Lisi’s house/That house belongs to Lisi’s family.’

The nominals in the above sentences fall into two categories:

(i) relational nouns:

a. kinship terms: *mama* ‘mother’, *jiuma* ‘aunt’, *niuer* ‘daughter’, *nainai* ‘grandma’;

b. relational common nouns: *pengyou* ‘friend’, *linju* ‘neighbour’, *diren* ‘enemy’,  
*xiaozhang* ‘principal’;

(ii) ordinary common nouns: *shu* ‘book’, *xuesheng* ‘student’, *fangzi* ‘house’.

Semantically, ordinary common nouns denote characteristic function of a set of entities, and relational nouns denote a characteristic function associated with a relation on the set of entities. For example, the common noun ‘doctor’ refers to a person who has the property of ‘being a doctor’, while a person counts as a ‘mother’

only in virtue of standing in a particular relationship with another individual, that is to say, a relational noun requires not only two individuals and also a relation between them. In this spirit, the common noun is a one-place nominal and the relational noun is a two-place nominal. The common noun and the relational noun ‘mother’ can be semantically instantiated as follows:<sup>63</sup>

- (9) a.  $\lambda x \lambda P [P(x)]$   
 b.  $\lambda x \lambda y \lambda R [R(x, y)]$

Let us consider the common noun ‘book’ and the relational noun ‘mother’:

- (9’) a.  $\lambda x [\text{‘book’}(x)]$   
 b.  $\lambda x \lambda y [\text{‘mother’}(x, y)]$

And ‘my mother’ should be further instantiated as:<sup>64</sup>

- (10)  $\iota y [\text{‘mother’}(I, y)]$

which means ‘the entity  $y$  such that  $y$  is the mother of  $I$ ’.

It is assumed that common nouns will be coerced into relational nouns when co-occurring with possessors as illustrated below:<sup>65</sup>

- (11) a. ‘book’:  $\lambda x [\text{‘book’}(x)]$   
 b. ‘my book’:  $\iota x [\text{‘possess’}(I, x) \wedge \text{‘book’}(x)]$

---

<sup>63</sup> ‘P’ stands for ‘property’ and ‘R’ stands for ‘relation’.

<sup>64</sup> Here an operation of quantifier-in is applied. That is to say, a definite operator ‘ $\iota$ ’ is inserted via functional composition which converts the relational noun into an entity.

<sup>65</sup> The term ‘coerce/coercion’ here refers to the reinterpretation of the language-user to all or parts of the semantic and/or formal features of a lexeme caused by the grammatical context. It does not specifically refer to and has no relation with Pustejovsky’s (1995) type “coercion”.

The above discussion shows that the possessors occurring in the nominal predicative constructions are to saturate the other argument slot of the relational nouns if the subject is supposed to be another argument extracted from the complement of the relational noun. This seems to be a perfect account for the obligatory occurrence of the possessor in the sentences discussed above, especially for the sentences whose predicate nominals are relational nouns. Considering that not all saturated predicates guarantee grammatical sentences as discussed in Chapter 1, this account does not explain satisfactorily why the possessor is capable of rescuing an ungrammatical sentence. See the example below:

(12) \**Zhe shu.*

This book

‘This is a book.’

It is shown that the sentence remains ungrammatical though the argument slot of the one-place nominal predicate *shu* ‘book’ has been saturated by the subject *zhe* ‘this’. In what follows, the assumption of nominal tense will be introduced to account for the contribution of the possessors in the above sentences.

### **4.3 The temporal structure of noun phrases: Lecarme (1996; 1999; 2004)**

In recent work, the parallel between clause and nominal phrases are frequently discussed. One of the prevailing arguments (Enç 1987; Kamp 1982; Guéron and

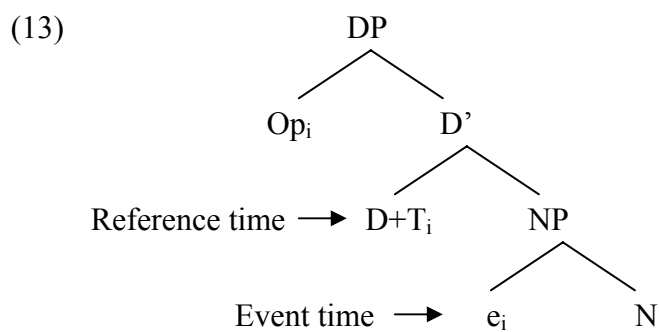
Hoekstra 1995; Musan 1995; Lecarme 1996; 1999; 2004; Demirdache 1997, among many others) is that nominal expressions, like clauses, are equipped with time variables and tense in nominals, like tense in the clause, can be deictic and with modal intervention. Pesetsky and Terrego (2001) propose that the nominative case on DP is an uninterpretable variant of a tense feature  $uT$ . Since this uninterpretable feature cannot be deleted on the DP cycle, DP has to move to SpecTP to check off its uninterpretable feature.

Based on the data from Somali, Lecarme (1996; 1999; 2004) proposes a syntactic account on the temporal structure of the nominal phrases. Her major points are summarized as below (Lecarme 2004:447):

- (i) Determiners, like proper names or connectives, have the same extension at every point of time: it is then T, not D, that is the element responsible for the “time sensitivity” of noun phrases;
- (ii) Time reference (C or D selecting T) is a universal property of language, independent of whether a given language has grammatical tense morpheme or not. Feature selection (a grammar selecting [T] as a formal feature for use in the computational system) is the locus of parametric variation.

- (iii) DPs can introduce tense operators. The temporal interpretation of noun phrases is syntactically construed as the creation of a “tense chain” (Guéron and Hoekstra 1995), in which a tense operator in Spec DP binds the variable *e*-position (*e* is used in the more general sense to cover the denotations of both nominal and verbal “entities”, and it stands for the time-sensitive “entity” variables in most cases)

The temporal structure of the nominal phrase is displayed as follows:



This diagram illustrates that the tense/event structure of nominals and clauses are similar: a chain ( $Op_i, T_i, e_i$ ) is the interpretable process shared by C-T-V and D-T-N which form “propositional” categories (like Event or Thing) at the semantic interface.

#### 4.4 The syntactic structure of possessive phrases

We have mentioned in 4.2.1 that relational nouns are semantically two-place nominals, that is to say, relational nouns are like transitive verbs taking two entities as their arguments. In such a case, a relational noun will be syntactically instantiated as a relation phrase RP with the possessor and the possessum locating at its specifier and

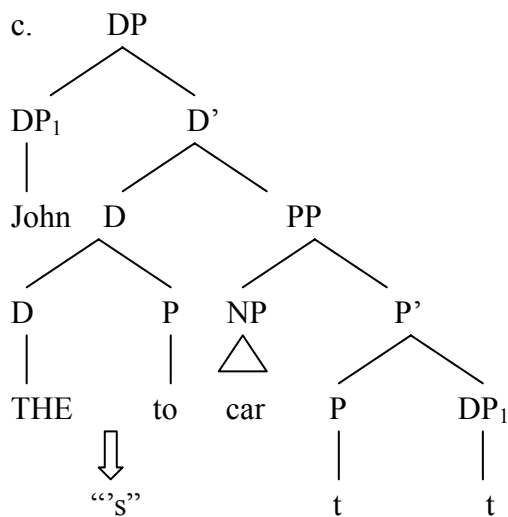
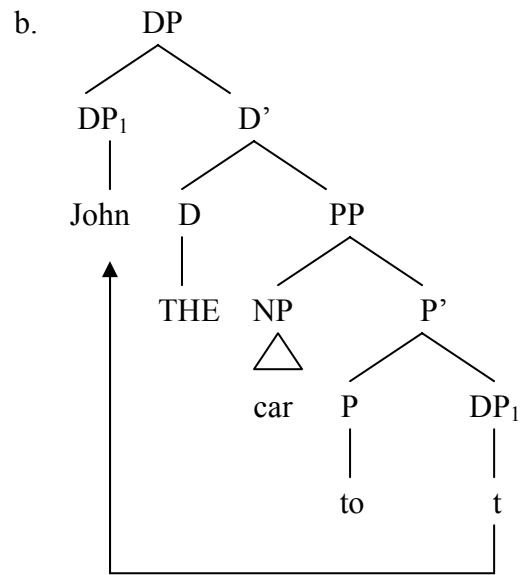
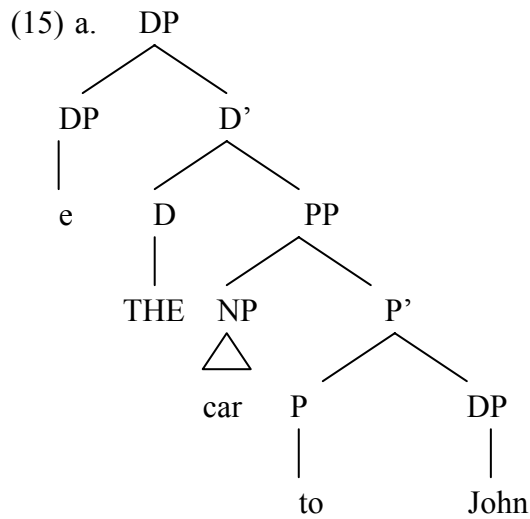
complement position respectively. While the picture will not be that simple since the relational noun is used to refer to an individual who has some relationship with another individual. Like the coerced relational common nouns ‘my book’ discussed in (11), there are actually two predicates involving in the relational nominal phrases, repeated here for convenience:

(14) ‘my book’:  $\lambda x[\text{possess}'(I, x) \wedge \text{book}'(x)]$

To capture this nature of relational nouns, two dominant approaches are proposed with respect to the syntactic structure of relational nouns. In what follows, I will introduce these two views briefly.

#### 4.4.1 Possessive nouns as prepositional phrases

Freeze (1992), among others, assume that the three constructions, i.e., locative, possessive and existential constructions share the same underlying structure--a locative structure. Following Freeze (1992), Larson and Cho (2003) propose that the possessive nominal, like the possessive construction, is a locative construction underlyingly. Take the possessive phrase *John's car* for example. They assume that the possessive nominal is a prepositional phrase selected by the functional category D, the surface word order is derived via the movement of the possessor from the complement position of P to the Spec of DP (15b) and the possessor marker is the product of head incorporation (15c) as illustrated below:



The treatment of taking the possessive nominal as a PP selected by D is parallel to the account of the verbal possessive construction where ‘have’ is supposed to be the composite of a copula and a preposition. This treatment is no doubt insightful in that it clarifies that fact that the possessor is an oblique argument introduced by a preposition rather than the core argument of the relational noun. While this syntactic account to the possessive nouns is not so satisfactory considering that the semantic property of

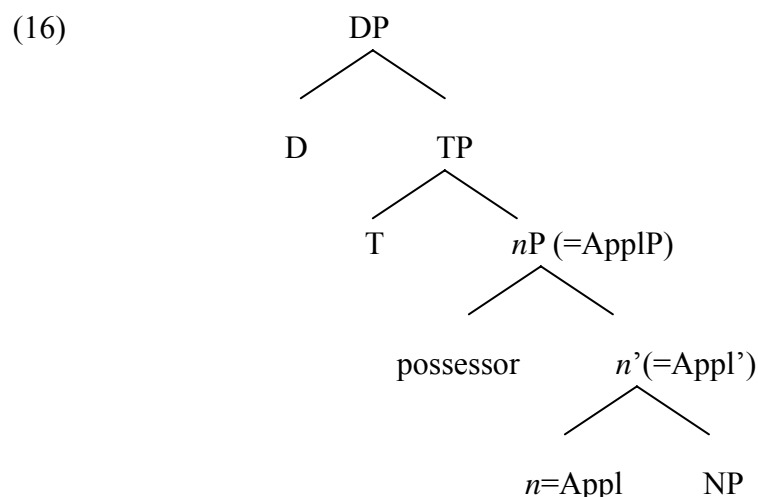
the relational noun is not correctly demonstrated. The discussion in 4.2 elaborates that the relational noun is of two predicates from semantic point of view: one is the head noun denoting the property of an individual and the other is R(elation) expressing the relationship between the possessor and the possessum. To treat the possessive noun phrase as a PP amounts to saying that there is a P relation between the possessor and the possessum, and the semantic predicate R is successfully demonstrated in the syntactic structure. But the property of the other predicate N is not correctly captured since the possessum is taken as an individual situated at SpecPP which is a typical argument position. This treatment is probably viable when the possessive noun phrase appears as an argument in the sentence but not possible when the possessive noun phrase is predicative.

#### 4.4.2 The applicative analysis (Lecarme 2004; 2008)

An alternative approach of dealing with the relation between nouns and their possessors is to take the possessive nominal as a DP with an applicative phrase complement (Lecarme 2004; 2008; Tomioka and Sim 2007). Following Marantz (1993), Lecarme (2004) proposes that the possessive constructions can be viewed as the nominal equivalent of double object construction. The genitive is neither a predicate nor a “true” argument of the noun, it is an “applied” argument in a complex predicate construction, which is similar to the higher object in English double object



construction. This argument, which is instantiated as the “possessor”, is an “affected object” introduced by an Appl(icative) head, and a  $\theta$ -relation holds between an individual  $y$  that is merged in its specifier and the individual  $y$  described by its complement NP. Besides the individual entities involved, Lecarme (2004) also incorporates time-sensitive verbal entities in the applicative structure. Based on her previous studies on the temporal structure of nominal phrases (see 4.3), Lecarme (2008) expands the possessive nominal phrases as follows:



The following assumptions are generalized from Lecarme (2004; 2008):

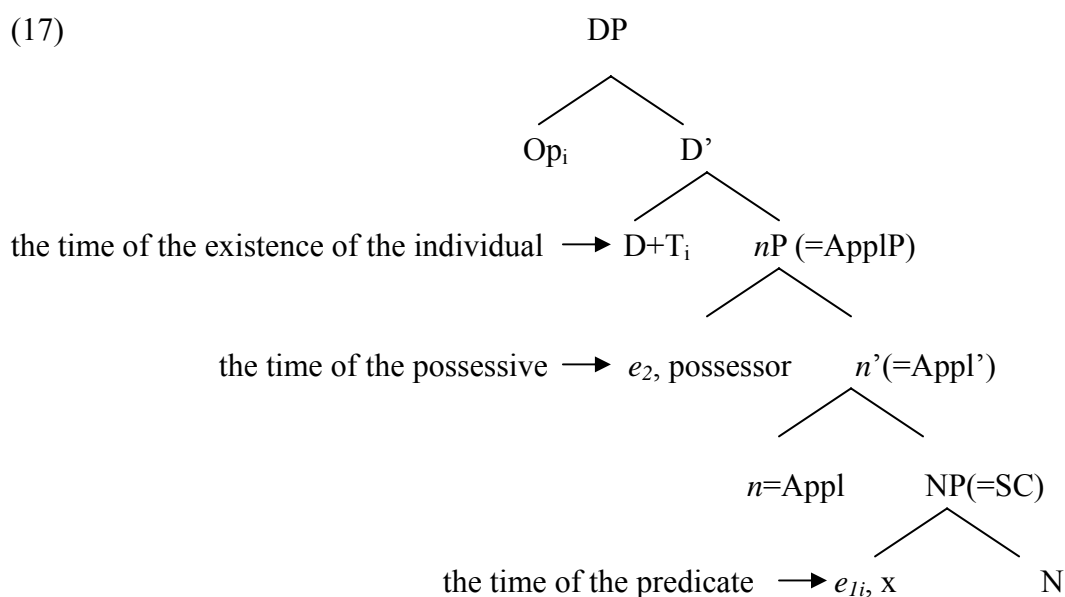
- (i) DP is formally parallel to CP, the light noun phrase *nP* is parallel to *vP* and selects the ‘external’ (possessor) argument;
- (ii) The genitive marker ‘s denoting the relation between the possessor and the possessum is an instance of Appl, which is represented as *n* in the diagram;
- (iii) Nominal Tense, like Definiteness, is interpreted as syntactic material. Thus,

[Definite] and [T] pattern together because they are both features on D;

- (iv) Three sets of times are potentially involved in the temporal interpretation of noun phrases: (a) the time of the predicate, i.e., the times at which a property is asserted to hold of an individual; (b) the time of the genitive/possessive relation 'R'; (c) the time of (existence of) the individual. Their corresponding syntactic domains are NP, nP and DP, respectively.

The temporal structure of the possessive nominal phrase may be displayed as follows

where  $e$  is used to denote the time-sensitive verbal entity with the temporal feature:



## 4.5 Possessive noun phrases in Mandarin

### 4.5.1 Possessive relational noun phrases with an implicit temporal argument

Enlightened by Lecarme's (1996; 1999; 2004) assumption that nominal phrases are parallel to clausal constituents in that nominal phrases are of nominal tense composed by two temporal argument: reference time and event time, I propose that there is an implicit temporal argument in the possessive relational noun phrases.

In 4.2.1, it has been noticed that nominals co-occurring with possessors in the nominal predication construction are of two types: relational nouns and common nouns, and the relational nouns can be further divided into kinship terms and relational common nouns. Since the common nouns can be coerced into relational common nouns when co-occurring with possessors, the relational nouns mentioned above can be recategorized as kinship terms and relational common nouns. These two kinds of relational nouns are classified as alienable and inalienable depending on whether their relationship with the possessums is permanent or transient: kinship terms are inalienable and relational common nouns are alienable.<sup>66</sup> Given that alienable possessive terms denote a kind of temporary, stage-level possession as proposed by Lecarme (2004), it will be much easier to detect the implicit temporal

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<sup>66</sup> Note that inalienable relational nouns also include body-part terms and nominals with part-whole relation. The concern of the discussion here is the relational nouns mentioned in the above sentences. Of course, our conclusion here applies to the other inalienable relational nouns.

argument of relational nouns by investigating the alienable relational noun. Look at the following sentences:

(18) a. Zhangsan women jia de linju.

Zhangsan our family DE neighbour

‘Zhangsan is our neighbour.’

b. Zhangsan women jia yiqian/zai Beijing shi de linju.<sup>67</sup>

Zhangsan our family before/in Beijing time DE neighbour

‘Zhangsan is our former neighbor/Zhangsan was our neighbour when we lived in Beijing.’

(19) a. Bushi tamen de zongtong.

Bush their DE President

‘Bush was their president.’

b. Bushi tamen yiqian de zongtong.

Bush their before DE President

‘Bush is their former president.’

Actually, the implicit temporal argument can be recovered in the inalienable relational noun phrases even when the relationship between the possessor and the possessum is

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<sup>67</sup> Note only the modification/possession marker DE to the immediate left of the head noun is reserved when several modifiers are stacked and the others tend to be omitted. For example, *wo de daxue de shihou de zhaopian* ‘my photo taken when I was in the University’ is often expressed as *wo daxue de shihou de zhaopian*. Thus, *women jia* ‘our family’ here is taken as a possessive phrase *women jia de* with the possession marker DE omitted. The other possessive phrases in this section behave the same way.

changed:

(20) a. Zhangsan wo zhangfu.

Zhangsan my husband

‘Zhangsan is my husband.’

b. Zhangsan wo (de) qian fu.

Zhangsan my DE former husband

‘Zhangsan is my ex-husband.’

(21) a. Zhangsan wo mama.

Zhangsan my mother

‘Zhangsan is my mother.’

b. Zhangsan wo (de) hou ma.

Zhangsan my DE after mother

‘Zhangsan is my step mother.’

But the question still remains as for how to determine the status of the inserted temporal expressions, to be specific, whether they are implicit temporal arguments or adjuncts. To distinguish the argument from the adjunct, it is crucial to decide whether the element concerned is obligatory or optional. When arguing that there is an implicit location argument in the argument structure of meteorological predicates like ‘rain’, Recanati (2007) proposes that the following dialogues can be used to test the status of

the locative expression:

(22) A: It is raining.<sup>68</sup>

B: Where?

A: #I have no idea.

According to Recanati (2007:128), if there is an argument slot in the lexical semantics of a verb, the slot has to be filled, whether explicitly or contextually. Thus, the negative answer to the location of the event is not allowed if the location concerned is supposed to be an argument of the predicate. Since the location is a culminated argument of the event ‘raining’, the location of the event may not be specified explicitly but has to be contextually understood. Thus, when the speaker utters the sentence ‘it is raining’, he is meant that it is raining in someplace irrespective of whether the place is specified or not. Aside from the argument-filling process required by the semantics of some expression in the sentence, there is a pragmatic process of free enrichment which is not required obligatory as represented below (Recanati 2007:128):

(23) A: John has danced.

B: Where has he danced?

A: I have no idea.

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<sup>68</sup> As proposed by Recanati (2002; 2007), the sentence here receives a location-indefinite interpretation and the location argument is to be existentially closed off in the context.

Since the location in the above utterance is an adjunct rather than an obligatory argument of the event ‘dancing’, the location need not be specified explicitly or contextually, it is thus felicitous to give a negative answer to the question at issue. The distinction between the pragmatic process of free enrichment and the semantic saturation of an argument slot is that whether the process is mandatory and required by the semantics of the sentence.<sup>69</sup>

Following Recanati (2007), the same approach can be utilized to test whether the inserted temporal expressions are the implicit argument of the relational noun phrases:

(24) A: Zhangsan wo (de) linju.

Zhangsan my DE neighbour

‘Zhangsan is my neighbour.’

B: Shenme shihou de linju?

What time DE neighbour

Literal: ‘The neighbour of what time?’

A: #Wo bu zhidao.

I not know

‘I have no idea.’

---

<sup>69</sup> Recanati (2007) claims that the assignment of the contextual values to the argument slot is a ‘bottom up’ process mandated by the linguistic material and the free enrichment is a ‘top down’ process which is not mandated by the linguistic material. For more details, please refer to Recanati (2007).

(25) A: Zhangsan wo (de) tongxue.

Zhangsan my DE classmate

‘Zhangsan is my classmate.’

B: Shenme shihou de tongxue?

What time DE classmate

Literal: ‘The classmate of what time?’

A: #Wo bu zhidao.

I not know

‘I have no idea.’

In the utterances above, an alienable relationship exists between the speaker and the possessum. If someone claims that he has certain kind of relationship with somebody, as a party involved in the relationship, he must be aware of the time when the relationship holds.<sup>70</sup> Otherwise, it will be weird to have such a claim. In such a case, the time duration of the relationship must be specified explicitly or contextually.

Actually, this time argument is frequently indicated explicitly in the sentence:

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<sup>70</sup> Generally speaking, both of the two parties involved in a relationship must be aware of the time duration when the relationship holds. Note that the speaker may not necessarily be involved in the relationship though the speaker is accidentally a party involved in the relationship in some cases. For example, in the statement that *Zhangsan Lisi de tongxue* ‘Zhangsan is Lisi’s classmate’, the speaker as a third party of the relationship may not be aware of the time duration, but Zhangsan and Lisi as the two parties of the relationship must know the time duration when the relationship of ‘being classmate’ holds between them. Of course, this will not deny the possibility that the time duration is only perceived by one party in some cases. Take the relational noun *fensi* ‘fans’ for example. Given that *fenshi* ‘fan(s)’ generally refers to a person who admires some celebrity, but the admired celebrity may not realize the enthusiasm from his/her admirer, it is probably that the celebrity does not know the time duration of enthusiasm of his/her admirer. For example, in the sentence *Zhangsan Qiaomusiji de fenshi* ‘Zhangsan is a fan of Chomsky’, the admiree Chomsky is not aware of the admiring relation between Zhangsan and himself and cannot know the time duration of this relation.



(26) a. Zhangsan wo daxue (shi) de tongxue.

Zhangsan my university time DE classmate

‘Zhangsan was my classmate when I was in the university.’

b. Zhangsan wo er shi de linju.

Zhangsan my childhood time DE neighbour

‘Zhangsan was my neighbour when I was in my childhood.’

c. Bushi meiguo de shang jie zongtong.

Bush America DE last term President

‘Bush was the last President of the United States.’

Besides, it is noticed that some relational nouns contain an implicit location argument

as illustrated below:

(27) a. Zhangsan women jia de linju.

Zhangsan our family DE neighbour

Literal: ‘Zhangsan is our neighbor.’

b. Zhangsan women jia shangmian/zuomian/youmian de linju.

Zhangsan our family upper/left/right DE neighbour

‘Zhangsan is our neighbor living in the upper floor/Zhangsan is the neighbour to our left/ right.’

Given that the relationship of *linju* ‘neighbourhood’ is established between two places, the location of the neighbour is determined in terms of the location of the referent place, i.e., the location of the neighbour is dependent on the location of the referent place. In such a case, the location of the neighbour has to be specified explicitly or contextually.

#### 4.5.2 The syntactic structure of the possessive phrase

Adopting Lecarme (2004), I assume that the possessive phrase in Mandarin is syntactically a DP with an applicative phrase complement and the possessor is not the true argument of the NP but an oblique argument introduced by the Appl head. Suppose that the genitive marker *de* is an instance of Appl like its English counterpart *'s*, the structure of the possessive phrase would be roughly as follows:

(28) [DP [AppIP possessor[Appl' *de* [NP possessum]]]]

Two issues are to be solved if such a treatment is adopted: (i) where is the position of the implicit temporal argument discussed above?; (ii) why DP is allowed to act as a predicate?

##### 4.5.2.1 The position of the implicit temporal argument

In her treatment to the possessive phrase, Lecarme (2004) incorporates two time-sensitive ‘entity’ variables *e* into the applicative structure. The two time-sensitive

variables are supposed to specify the time of predication and the time of the possessive relation, which are supposed to be within the syntactic domain of NP and ApplP, respectively. In the discussion above, it has been observed that the possessive phrase in Mandarin does encapsulate an implicit temporal argument. Then the question arises as for where the temporal argument should be located, i.e., whether the temporal argument is to define the time of the predicate and the time of the possessive relation.

Following Lecarme (2004), there are two lexical arguments in the possessive phrases: one is the argument 'x' predicated of by N, namely, the individual with the property of N; the other is the argument introduced by Appl, i.e., the possessor. Given that the lexical arguments involved in the eventualities are different, it is possible to detect the location of the temporal argument in terms of the participants of the eventualities. To be specific, if the lexical argument related to the temporal argument is introduced by Appl, then the temporal argument is to define the time of the possessive relation; If the lexical argument related to the temporal argument is the argument of N, the temporal argument is to define the time of the predicate.

Given that the argument introduced by Appl is specified as the possessor is, it will be easy to detect whether the temporal argument is related to the time of the possessive relation. While the argument of N is an individual slot to be saturated, a

roundabout way is required to decide whether the temporal argument is related to the time of the predicate, specifically, the value of the individual argument has to be defined first. Here we propose that the subject is co-indexed with the individual argument for the reason that the argument slot is assumed to be left by subject raising (cf. Freeze 1992; Szabolcsi 1994). In what follows, let us examine which lexical argument is allowed to appear in the implicit temporal argument:

(29) a. Zhangsan wo daxue shi de tongxue.

Zhangsan I university time DE classmate

‘Zhangsan is my university classmate.’

b. Zhangsan wo (de) (wo shang) daxue shi de tongxue.<sup>71</sup>

Zhangsan I DE I go university time DE classmate

‘Zhangsan was my classmate when I was in the university.’

c. \*Zhangsan wo (de) (Zhangsan shang) daxue shi de tongxue.

Zhangsan I DE Zhangsan go university time DE classmate

Literal: ‘Zhangsan was my classmate when Zhangsan was in the university.’

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<sup>71</sup> The genitive pronoun *wo (de)* ‘my’ and the nominative pronoun *wo* ‘I’ are not allowed to co-occur in Mandarin due to the phonological constraint. Though it is not that natural to articulate the two simultaneously in one sentence as displayed, it is acceptable/understandable. In English, the two pronouns can be present in one sentence as its English interpretation illustrates. Another point worth noting is that the verb in the implicit temporal argument is not spelt out, which is reminiscent of the non-intersective modifiers with an implicit verb (cf. Section 3.7.2). I would thank Sze-Wing Tang for pointing this to me.

(30) a. Zhangsan wo er shi de huoban.

Zhangsan I child time DE playmate

‘Zhangsan is my childhood playmate.’

b. Zhangsan wo (de) (wo) er shi de huoban.

Zhangsan I DE I child time DE playmate

‘Zhangsan was my playmate when I was a child.’

c. \*Zhangsan wo (de) (Zhangsan) er shi de huoban.

Zhangsan I DE Zhangsan child time DE playmate

Literal: ‘Zhangsan was my playmate when Zhangsan was a child.’

The examples above show that only the possessor can be present in the temporal clause, which suggests that the temporal argument be related to the eventuality denoted by the ApplP rather than the NP.

#### 4.5.2.2 Predicative possessive phrases as weak DPs

As discussed in Chapter 1, DPs are not allowed to function as predicates in Mandarin Chinese. Then the question arises as for why the possessive phrase as DP can be used predicatively. To solve this problem, I have the following two assumptions:

- (i) The predicative possessive phrase is a weak determiner phrase;
- (ii) An individual slot is to be saturated in the possessive phrase.

Since Milsark (1974; 1977) indicates the strong/weak distinction between two types of determiner phrases, there is a consensus that weak DPs are capable of being predicates while strong DPs are not allowed to appear in predicative positions (Barwise & Cooper 1981; Heim 1987; Keenan 1987; Zamparrelli 1995, among many others). In connection with this, DPs are supposed to be split into two layers syntactically (Zamparrelli 1995, Sio 2006, among others): Strong Determiner Phrase (SDP) vs. Predicative Determiner Phrase (PDP). According to Zamparrelli (1995), the PDP layer denotes a property which is predicated of the head SD, an e-type element at LF.<sup>72</sup> Though the determiner system of a language is constituted of SDP and PDP, many determiners can appear either within SDP or PDP, the SDP head is empty for a predicative nominal. This ambiguity between SDP and PDP applies to possessive noun phrases. Partee (1983, et seq.) proposes that possessive relational noun phrases are weak DPs, i.e., PDP in the sense of Zamparrelli (1995), when they appear in predicative positions while they are strong DPs when they are in subject positions.

To distinguish strong determiner phrases from weak determiner phrases, Milsark (1977) posits two diagnostic criteria:

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<sup>72</sup> The letter 'e' here and in the remaining parts of this subsection is the notation in classical semantics denoting the semantic type of an entity.

- (i) whether the determiner phrase can appear in existential constructions;
- (ii) whether the determiner phrase can be the subject of the i-level predicate.

It is assumed that strong DPs cannot appear in existential constructions but can be the subject of the i-level predicate as displayed below:

- (31) a. There is a book on the shelf. (weak DP)
- b. \*There is the book on the shelf. (strong DP)
- (32) a. \*A student knows three languages. (weak DP)
- b. The student knows three languages. (strong DP)

If Partee's (1983, et seq.) assumption is correct, namely, the possessive relational noun phrase is ambiguous between strong DPs and weak DPs, we would expect that the possessive relational noun can appear in the existential construction and function as the subject of the i-level predicate. See the following sentences:

(33) a. Shujia shang you wo de shu.<sup>73</sup>

Shelf on have I DE book

‘There is/are a/some book(s) of mine on the shelf.’

b. Guizi li you wo de yifu.

Wardrobe inside have I DE clothes

‘There is/are a piece of/some clothes of mine in the wardrobe.’

---

<sup>73</sup> I am aware that the Chinese examples listed here are not completely equivalent to their English counterparts. It is observed that the indefinite noun phrases in Chinese behave the same as those in the English existential construction as illustrated below:

(i) You (yi) ben shu zai shujia shang.

Have one Cl book on shelf on

‘There is a book on the shelf.’

Clearly, the possessive noun phrases in Chinese are not used this way unless an indefinite article/numeral classifier phrase is inserted to limit the bare NP:

(ii) a. \*You wo de shu zai shujia shang.

Have I DE book on shelf on

‘There is my book on the shelf.’

b. You wo de yi ben/yixie shu zai shujia shang.

Have I DE one Cl/some book on shelf on

‘There is a book/some books of mine on the shelf.’

Partee (1999) distinguishes the postnominal from the prenominal genitives and proposes that the prenominal genitives in English fuse the genitive NP with an implicit definite article by function-composition. This operation, i.e., quantifier-in, is not observed in postnominal genitives, which is still of the semantic type <e,t>. For details of the operation, please refer to Partee (1999). If such is the case, the possessive relational noun phrases in Chinese will be assumed to have two distinctive underlying structures, corresponding to the English prenominal and postnominal genitives respectively. For example, the possessive relational noun *wo de shu* is encoded in two ways: when it is interpreted as the only book of mine, it is definite and equals to its English prenominal genitive counterpart ‘my book’; when it is interpreted as one book of mine, it is indefinite and is equivalent to the English postnominal genitive ‘a book of mine’. In such a case, if the possessive relational noun is taken as the English counterpart of prenominal genitive, it is not allowed to occur in the existential construction due to its definiteness; if it is taken as the postnominal genitive, its occurrence in the existential construction is legitimate due to its indefiniteness. Actually, the English interpretations of the corresponding Chinese examples have revealed this fact (see iia and iib).

Though the possessive relational noun cannot occur in the canonical existential construction, it is allowed to appear if some supplemented devices are used. Besides, it is possible for the possessive relational noun to occur in the variant of the existential construction as displayed here. Thus, the opposition between the possessive relational noun and strong determiner phrase is clearcut since no devices can save the existential sentence if the determiner phrases occurring in the construction are strong ones:

(iii) a. \*You zhe ben shu zai shujia shang.

Have this Cl book on shelf on

‘There is this book on the shelf.’

b. \*You wo de zhe ben shu zai shujia shang.

Have I DE this Cl book on shelf on

‘There is this book of mine on the shelf.’



(34) a. Wo (de) nüer dong san zhong yuyan.

I DE daughter know three Cl language

‘My daughter knows three languages.’

b. Ta (de) erzi hen congming.

He DE son very clever

‘His son is clever.’

The above examples show that the possessive relational noun phrases in Chinese behave similarly with both strong DPs and weak DPs in that it may appear in the existential construction and can be the subject of the i-level predicate. This suggests that Partee’s (1983, et seq.) claim applies to the Chinese possessive noun phrases: the possessive noun phrase is a weak DP when it is predicative, otherwise it is a strong DP.

Semantically, the distinction between strong DPs and weak DPs hinges on whether the entity denoted by the DP is unique. Put it differently, the entity denoted by the strong DP should be unique while the weak DP has no such requirement. If the assumption that the possessive relational noun in Chinese is encoded ambiguously is

on the right track, then the uniqueness requirement will be observed in the possessive relational noun phrases in the subject position:

(35) Ta (de) erzi hen congming.

He DE son very clever

‘His son is clever.’

The interpretation of the possessive phrase *ta de erzi* ‘his son’ is felicitous if only if the possessor has only one son. Otherwise, the speaker has to indicate which son of the possessor has the property of “being clever”. See the example below:

(36) Ta (de) da/er/xiao erzi hen congming.

He DE eldest/second/youngest son very clever

‘His eldest/second/youngest son is clever.’

In cases when the possessor has more than one son, the alternative to give a felicitous interpretation is to take the set of “son” as a unique set and each member of the set will be quantified/distributed over. Thus, a universal quantifier *dou* ‘all’ is required obligatorily as exemplified below:

(37) Ta (de) erzi dou hen congming.

He DE son all very clever

‘All of/Each of his son is clever.’

The predicative possessive phrase, on the contrary, has no uniqueness requirement.

Hence, the entity denoted by the possessive relational noun in the following sentences

will not necessarily be interpreted as the unique one:

(38) a. Zhe ta (de) erzi.

This he DE son

‘This is his son.’

b. Zhe ta (de) shouzhitou.

This he DE finger

‘This is his finger.’

When (38a) is uttered, the possessor might have more than one son and each one of his sons can be addressed as his son, thus *erzi* ‘son’ here is to denote the relation between the possessor and the person which has the property of ‘being a son’ rather

than identify the unique son of the possessor. (38b) gives a much clearer picture to the fact since it is not possible for the possessor to have one finger only and *ta de shouzhitou* ‘his finger’ cannot be the unique finger of his accordingly.

The discussions above illustrate that the predicative possessive relational nouns in Chinese are weak determiner phrases which denote property rather than entity. Thus, to treat the possessive relational noun as DP is not contradictory to our previous observation that DPs cannot function as predicates in Chinese considering what we discussed in Chapter 1 are strong DPs other than weak ones.

The second issue to be addressed is that there is an individual slot in the possessive relational noun. This issue is closely related to the first topic discussed above, to some extent, it is actually the consequence of treating the predicative possessive phrase as weak DP. As proposed by Zamparrelli (1995) that the weak DP, or PDP in her sense, is semantically of type  $\langle e, t \rangle$  rather than  $\langle e \rangle$ . Recall that the relational noun is a two-place noun which encodes the possessive relation between two entities, in other words, the relational noun is semantically a predicate rather than an entity. Considering that the possessor is an argument introduced by the Appl head, the possessum will be regarded as the argument directly predicated of by the relational noun. Partee’s (1983, et seq.) presentation below illustrates the composition clearly:

- (39) a. [<sub>G</sub> 's]:  $\lambda y \lambda R [\lambda x [R(y)(x)]]$   $\langle e, \langle \langle e, \langle e, t \rangle \rangle, \langle e, t \rangle \rangle \rangle$
- b. *of John's*:  $\lambda R [\lambda x [R(\text{John})(x)]]$   $\langle \langle e, \langle e, t \rangle \rangle, \langle e, t \rangle \rangle$
- c. *teacher of John's*:  $\lambda x [\text{teacher}(\text{John})(x)]$   $\langle e, t \rangle$

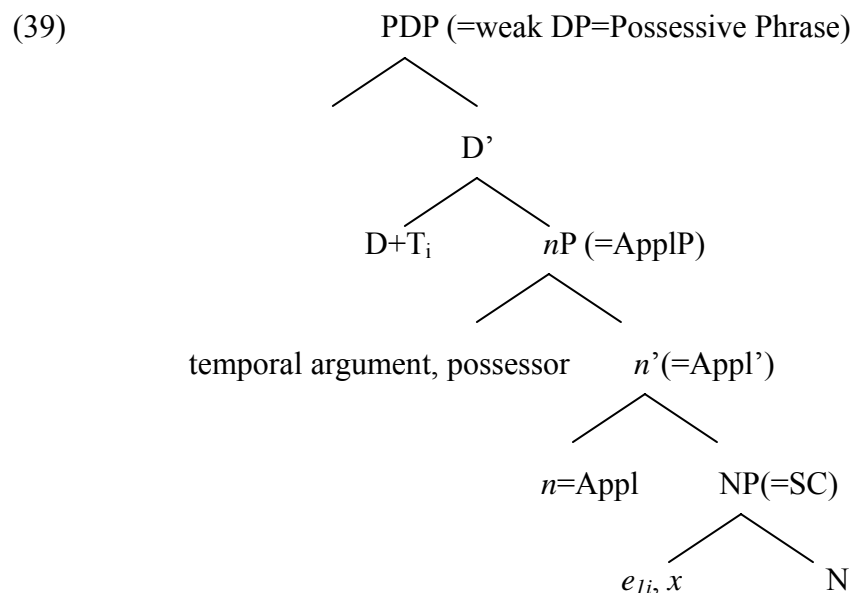
In the above semantic representations, the relational noun is a predicate indicating a relation which is instantiated as R. Since R is a two-place predicate, its semantic type will be  $\langle e, \langle e, t \rangle$ . 'x' and 'y' are the two entities related by R and are of type  $\langle e \rangle$ . It is represented that the entity 'y', namely, the possessor is introduced by the possessive marker 's, and the other argument of the possessive marker 's is the relational noun phrase which is abstracted as  $\lambda R [\lambda x [R(y)(x)]]$ , and the semantic type of the possessive marker 's is  $\langle e, \langle \langle e, \langle e, t \rangle \rangle, \langle e, t \rangle \rangle \rangle$ ; the possessor y is instantiated as *john* which is converted in (38b), and an individual variable x and a predicate variable R still remain unsaturated in the representation, the semantic type of (38b) is  $\langle \langle e, \langle e, t \rangle \rangle, \langle e, t \rangle \rangle$ ; when the abstracted predicate is converted as *teacher* in (38c), i.e., the possessive phrase *teacher of john's* still has an individual variable unsaturated, thus will be of semantic type  $\langle e, t \rangle$ , the unsaturated individual can be viewed as one who has a relationship of 'teacher' with John. This unsaturated variable is semantically caused by an operation of individual abstraction and syntactically taken as the consequence of argument raising (subject-raising here) which leaves a trace in its original position.

The discussion that the predicative possessive relational phrase has an individual slot is in conformity with Zamparralli's assumption that PDP denotes a property and is of type  $\langle e,t \rangle$ . More significantly, this assumption will result in the following consequences:

- (i) The predicative possessive relational noun is a DP whose denotation is not closed off by the operator as represented in (13);
- (ii) The unsaturated individual, namely, the trace left by argument raising, should be co-referent with its antecedent. The antecedent of the individual variable in the predicative possessive construction is supposed to be the subject since the subject also has a kind of relation with the possessor. Hence, the individual variable is expected to be co-indexed with the subject. In other words, the subject is base-generated as an argument of the relational noun N and the trace is actually left by subject raising.

#### 4.5.2.3 The syntactic structure of the predicative possessive phrase

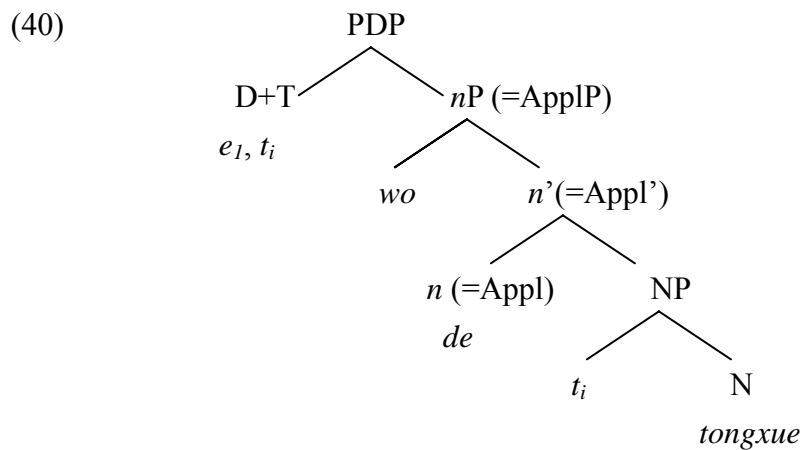
Based on our discussions above that (i) the inherent implicit temporal argument is to modify/specify the time of the possessive relation; and (ii) the predicative possessive phrase is a weak DP with an individual slot in it, the syntactic structure of the possessive phrase proposed by Lecarme (2008) will be slightly modified as follows:



In the structure above, the possessive phrase is ultimately projected as a PDP, i.e., a predicative DP or a weak DP, which takes an Applicative phrase as its complement.

The lexical argument introduced by the *n*/Appl head is realized as the possessor and the time of the possessive relation is defined by the temporal argument explicitly or contextually. As proposed by Lecarme (2004), the time-sensitive verbal entity denoting the time of the existence of the individual and the time-sensitive verbal

entity denoting the time of the predicate are co-indexed, and the individual arguments predicated of by N and D are also co-refered.<sup>74</sup> In other words, the time values of the two verbal entities are identical and the individual arguments predicated of by N and D should be the same. Since the possessive nominal phrase is a weak DP, neither the time-sensitive verbal entity nor the individual variable will be bound and closed off by the operator, their values have to be defined at the sentential level since they will not be determined within the DP cycle. The possessive nominal phrase *wo de tongxue* ‘my classmate’ gives a clear illustration to the structure:



It is shown clearly that a time-sensitive verbal entity and an individual variable remain unvalued after all other positions are filled out. If the assumption concerning the parallel between D and C is correct (Lecarme 2004; 2008), then DP should be taken as

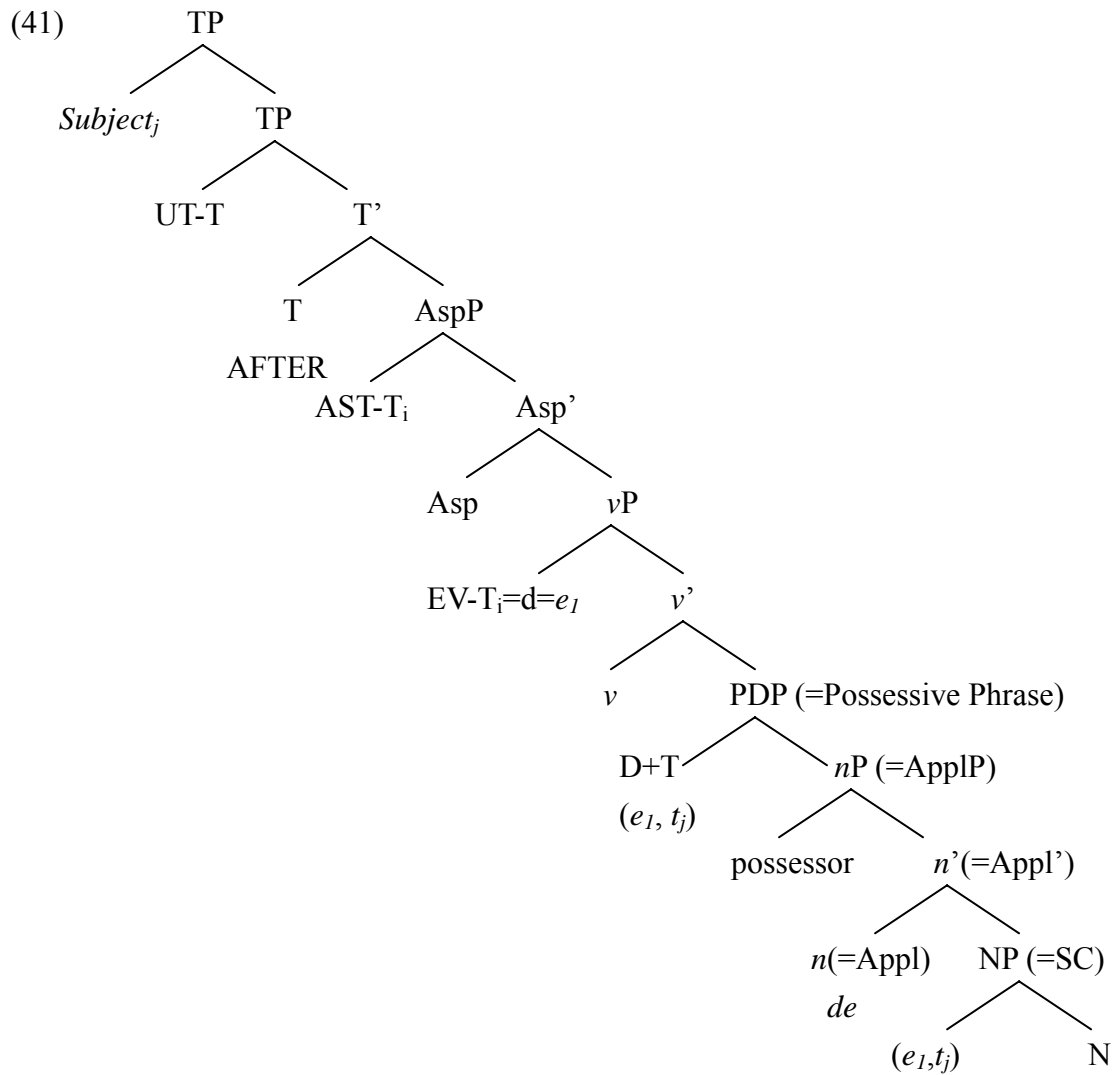
<sup>74</sup> The time-sensitive verbal entity denoting the time of the existence of the individual should be taken as the temporal argument located at SpecTP in D&U-E’s framework, but the time argument here is reduced to a subscript ‘i’ of T head in Lecarme’s (2004) proposal. If the structure is further decomposed as suggested by D&U-E (2004), three temporal phrases will be analyzed indicating the time of NP, nP and DP domain, respectively. The time-sensitive verbal entities will thus be situated at the Spec positions of the corresponding TPs. Despite their technical distinctions, the two approaches actually share the same spirit. To keep consistent with Lecarme’s (2004; 2008) analyses to possessive nominal phrases, the structure here follows Lecarme’s practice.



a nominal phase. In such a case, only the elements at the edge positions are accessible to the constituents in the outer domain according to Chomsky's (2000) Phase Impenetrability Condition. Thanks to the fact that the two variables are situated at the left periphery of DP which enables them to interplay with the constituents at the sentential level and be bound consequently. The discussion of next subsection will demonstrate how the two variables are closed off sententially.

#### **4.6 The syntax of the predicative possessive nominal construction**

In the last section, the syntactic structure of the possessive nominal phrase has been set up. But still there are two open positions to be bound at the sentential level. To calculate the values of the two variables within the possessive phrase, I would incorporate D&U-E's (2004) framework with Lecarme's (2004; 2008) analyses on the possessive phrase and build up the syntactic structure of the predicative possessive nominal construction. The syntactic structure of the predicative possessive nominal construction is represented below:



Complicated as the structure looks like, the problems to be addressed just converge at two points: (i) how to define the two variables within the PDP at sentential level; (ii) how to make the Davidsonian argument visible. In what follows, I would account for the two issues in detail.

As discussed in the above section, the predicate of the construction is a possessive phrase which is taken as a weak DP and instantiated as a PDP syntactically.

It is argued that the predicative possessive phrase is open with two variables to be

saturated at the periphery of the PDP. Following Partee (1983, et seq.), the lexical variable left in the PDP is assumed to be originated as the argument of the relational noun. Syntactically, the phrase projected by the relational noun can be regarded as a small clause with the relational noun predicating of an individual. Since the possessor is an oblique argument introduced by the Appl head, its occurrence will not affect the grammatical property of the possessive phrase. In other words, the possessive phrase can be regarded as a complex noun phrase with the relational NP serving as the core. Suppose the relational NP is a small clause, an individual slot has to be created to make the small clause a predicate. Thanks to the EPP feature carried by TP, the subject of the small clause will move upward to SpecTP to check off the EPP feature. Consequently, the small clause becomes an eligible predicate due to the existence of the individual slot and the trace left by the subject will naturally be co-indexed with the subject.

As for the time-sensitive variable  $e_I$  in the possessive phrase, it originally denotes the time of the predicate as indicated in Lecarme (2004; 2008), in other words, the time-sensitive verbal variable  $e_I$  involves the “relational” property an individual possesses. The time-sensitive verbal entity  $e_I$  is supposed to be of the identical value with the time-sensitive verbal entity denoting the time of the existence of the individual which is situated at the periphery of PDP, an edge position of PDP which

can easily interact with the sentential elements. Recall that the light verb is supposed to accommodate a Davidsonian argument at its specifier position. Given that the Davidsonian argument is also about the “relational” property of an individual, i.e., the subject of the sentence, the time value of the Davidsonian argument is thus expected to be identical with the time of the existence of the individual. If such is the case, the Davidsonian argument will be co-indexed with the time-sensitive verbal entity located at SpecPDP as illustrated in the tree diagram.

The second issue to be accounted for is how to determine the value of the Davidsonian argument. To solve this problem, I would like to follow Lecarme’s (2004) proposal that the relation between the two individuals exceptionally exists before the utterance time UT-T by default. In such a case, the temporal predicate will be instantiated as AFTER, that is to say, the UT-T is after the AST-T. Since no aspectual interpretations involved, the AST-T is assumed to be of the same value with the EV-T, namely, the Davidsonian argument of the sentence. Considering that the UT-T is either specified explicitly or designated by the context, the value of the EV-T can be decided via the temporal predication operation.

By adopting Lecarme’s (2004) treatment to the possessive phrase in conjunction with D&U-E’s (2004) temporal theory, the grammaticality of the predicative possessive construction could be accounted for though the calculation to the values of

the Davidsonian argument, the time-sensitive variable  $e_I$  and the individual variable  $x$  is complicated.

## 4.7 Predictions

### 4.7.1 Possessors and modified nominal predicates

It is shown above that possessors are able to save the nominal predicative construction. In addition, it is observed that by the employment of possessors, some ungrammatical nominal predicative sentences with modified nominal predicates can be saved. The examination to the modifier in Chapter 3 reveals that intersective modifiers like *nianqing* ‘young’, *piaoliang* ‘beautiful’ are not capable of salvaging the nominal predicative construction. The examples below illustrate that the application of the possessor can save the sentence satisfactorily:

(42) a. \*Aobama nianqing (de) zongtong.

Obama young DE president

‘Obama is a young President.’

b. Aobama meiguo de nianqing zongtong.

Obama American young president

‘Obama is the young President of the United States.’

(43) a. \*Zhangsan piaoliang nuer.

Zhangsan beautiful daughter

‘Zhangsan is a beautiful daughter.’

b. Zhangsan wo de piaoliang nuer.

Zhangsan I DE beautiful daughter

‘Zhangsan is my beautiful daughter.’

The above examples illustrate that the possessor is capable of coercing the common noun into the relational common noun. Otherwise, the sentence will remain ungrammatical due to the lack of the possessive relation:

(44) a. \*Zhangsan piaoliang de yanyuan.

Zhangsan beautiful DE actress

‘Zhangsan is a beautiful actress.’

b. \*Zhangsan wo de piaoliang de yanyuan.

Zhangsan I DE beautiful DE actress

‘Zhangsan is my beautiful actress.’

c. Zhangsan women ju tuan de piaoliang (de) yanyuan.

Zhangsan our drama troupe DE beautiful DE actress

‘Zhangsan is a beautiful actress of our drama troupe.’

The nominal predicate *yanyuan* ‘actress’ in the examples above is seldom to be considered as the possessum of an individual. In such a case, the possessive pronoun does not coerce the common noun into a relational common noun successfully. But when the possessor is replaced by *jutuan* ‘drama troupe’ which is generally considered as possessing some actors/actresses, the nominal predicate *yanyuan* ‘actress’ can be coerced into a relational common noun successfully. The sentence will be saved as demonstrated above.

#### 4.7.2 “Gapless restrictive clauses” as nominal predicates

In Mandarin Chinese, there exist a considerable number of relational nouns with a gapless adnominal modifier. The relational noun of this type is generally addressed as “gapless restrictive clauses” given that there is no gap in the modifier clause. Semantically, the modifiers are considered to denote an “aboutness” relation with the head noun. The examples are listed as follows:

(45) a. ta chang-ge de shengyin

he sing-song DE sound

‘the sound of his singing’

b. ta chao-cai de weidao

he fry-dish DE smell

‘the smell of his dish frying’

c. ni zuo huaishi de xiachang

you do evil things DE consequence

‘the consequence of your doing evil’

Syntactically, this kind of construction is analyzed as a “gapless restrictive clause”

(Zhang 2007) or a complex noun phrase with adnominal clauses (H.-C.Tsai 2008).

Despite of the controversy on the nature of the construction, the concensus is that the

head noun is a relational noun and will be of an individual slot. This will guarantee

that the relational noun is qualified as a lexical predicate. Due to the occurrence of the

possessor, an interaction between the event arguments is expected within the

possessive phrase as well as beyond the possessive phrase. Consequently, the “gapless



restrictive clause” will be eligible to occur as a possessive predicate. See the following examples:

(46) a. Zhe ta chang-ge de shengyin.

This he sing-song DE sound

‘This is the sound of his singing.’

b. Zhe ta chao-cai de weidao.

This he fry-dish DE smell

‘This is the smell of his dish frying.’

c. Zhe ni zuo huashi de xiachang.

This you do evil things DE consequence

‘This is the consequence of your doing evil.’

#### 4.7.3 Collective nominal predicates and nominal predication

Another type of nominals worth discussing is the collective nominal predicate denoting the relationship between two individuals which could be viewed as a special

kind of relational noun. It is observed that the collective predicate nominal is allowed to appear in the nominal predicate construction without the support of the copula:

(47) a. Tamen (lia) fu-qi.

They two husband-wife

‘They two are husband and wife.’

b. Tamen (lia) shi-tu.

They two master-apprentice

‘They two are master and apprentice.’

The collective nominal predicates listed above can be taken as a special kind of relational nouns. The only distinction between the collective nominal predicate and the other relational nouns lies in that both individual arguments of the collective nominal predicate, i.e., the possessor and the possessum, are extracted to the subject position, thus, a plurality requirement for the subject is observed.

#### **4.8 Summary**

The topic of this chapter is the possessive nominal predicative construction. Different from the predicative nominals discussed above, the predicate nominals in this kind of

predicative construction are relational nouns rather than common nouns. Since relational nouns are semantically considered as two-place nominals, it is observed that the occurrence of the possessor may fill in one individual slot of the relational noun and salvage the incomplete nominal predication construction.

To account for why possessive nominal phrases are eligible nominal predicates in the copulaless nominal predication construction, Lecarme's (2004; 2008) assumptions on the temporal structure of nominals and her applicative analysis to possessive nominal phrases are introduced. Different from the other nominal predicates which are syntactically analyzed as NP, the possessive nominal phrase is syntactically considered as a DP. According to Lecarme (2004; 2008), determiners have the same extension at every point of time and it is T rather than D that is responsible for the time sensitivity of noun phrases and an operator at SpecDP is to bind the variable within DP. Thus, what is crucial for the predicative possessive nominal to occur in the copulaless nominal predication construction is closely related to the temporal element involved in DP.

As for possessive nominal phrases, she proposes that they are syntactically DPs as well. The distinction between the possessive phrase and the other DPs lies in that the complement of D is an applicative phrase ApplP instead of an NP. The Appl head denoting the relation between the individuals is instantiated as the genitive marker

which introduces an applicative argument, i.e. the possessor into the structure. As suggested by Lecarme (2004; 2008), possessive nominal phrases are parallel to CP in that there are three sets of times involved in the temporal interpretation of noun phrases: (a) the time of the predicate, i.e., the times at which a property is asserted to hold of an individual; (b) the time of the genitive/possessive relation ‘R’; (c) the time of (existence of) the individual. Their corresponding syntactic domains are NP, *nP* (i.e., ApplP) and DP, respectively.

Following Partee (1983, et seq.) and Zamparrelli (1995) that the predicative possessive phrase is a weak DP, I assume that neither the time of the existence of the individual nor the individual predicated of by the relational N is closed off by the operator at SpecDP. The temporal variable and the individual variable have to search for their antecedents at sentential level. It is supposed that the individual variable is co-indexed with the subject since the open slot is actually a trace left by subject raising. The temporal variable within DP whose value is supposed to be identical to that of the Davidsonian argument is proposed to occur BEFORE the UT-T, and its value is thus acquired via the interaction among the three time arguments of the matrix sentence, i.e., the UT-T, the AST-T and the EV-T.

Our observations to the other types of possessive phrases, including gapless

relative clauses and collective nominal predicates, support our analyses to the predicative possessive phrases.

**5.1 Nominal predication in Mandarin Chinese: implications**

This thesis intends to give a unified account to nominal predication in Mandarin Chinese from the perspective of Davidsonian event theory which claims that every legitimate sentence is endowed with a Davidsonian argument. Though the scope of this study is confined to three types of nominal predication construction, the investigation to these constructions has presented sufficient evidence to the claim that nominal predication in Mandarin Chinese is nothing in particular and the grammaticality of these constructions is dependent on the visibility of the Davidsonian argument as well. In this connection, the nominal predication construction is parallel to verbal predication in Mandarin Chinese and it is even no different from nominal predication in inflectional languages. The most distinctive divergence between nominal predication in Mandarin Chinese and other kinds of predication, including verbal predication in Mandarin Chinese and nominal predication in inflectional languages lies in the distinctive devices in articulating the Davidsonian argument.

The Davidsonian argument is easily realized for the inflectional languages like English. Different from the isolated languages, the inflectional languages have

developed tense and aspect systems and the inflectional requirement for tense has to be satisfied obligatorily. Since the the requirement for tense inflection is not limited to verbal predication but extended to nominal, adjectival and prepositional predication, the copula is needed obligatorily for tense requirement.

As is proposed by Krazter (1989) that the Davidsonian argument can be instantiated as the spatio-temporal argument, the satisfaction to the inflectional tense requirement would be an efficient way to spell out the spatio-temporal argument and the visibility of the Davidsonian argument is no big problem in the inflectional languages.

Mandarin Chinese, being an isolated language, is not of grammaticalized tense system and the most convenient way to articulate the Davidsonian argument is thus not available for Chinese. It is for this reason that the discussion on the completeness of the sentences in Chinese has lasted for years (Kong 1994; Tang & Lee 2001; Hu & Shi 2005; Tsai 2008; among many others). Despite of this, the realization of the Davidsonian argument is not a difficult task for verbal predication considering that the Davidsonian argument is innate in the argument structure of the verbal predicate from the perspective of event semantics and indirect ways for articulating the Davidsonian argument can be easily appealed to. Based on Liao's (2004) assumption that the aspectual system in Chinese is of three layers, Tsai (2008) proposes that the

Davidsonian argument in the verbal predicate construction can be spelt out via verb movement from inner aspect to middle/outer aspect.

As for nominal predication, the spelt-out of the Davidsonian argument depends on the support of the copula *shi* ‘be’ in most cases. But there are still cases where the nominal predicate construction may be self sufficient without the copula support as what we have investigated in this thesis. Comparing with the nominal predication constructions with the copula support, those copulaless nominal predication constructions are observed to be related to event implicitly or explicitly irrespective of whether the event-related elements occur at lexical, phrasal or clausal level. In other words, the copula can be absent only when the nominal predicate construction can spell out the Davidsonian argument by its own.

The following aspects are observed to contribute to the realization of the Davidsonian argument:

- (i) The nominal predicates are event-related nouns when no other elements can be appealed to to articulate the Davidsonian argument. The nominals fall into the following categories:
  - a. deverbial nominals derived via event nominalization: *kaoshi* ‘examination’, *zhanlan* ‘exhibition’, *miaohui* ‘temple fair’;
  - b. nominals derived via nominalization to the agent of the event which include



nominals indicating profession, identification, etc.: *xuesheng* ‘student’,  
*gongren* ‘worker’, *zongtong* ‘president’;

- c. nominals with an implicit event argument, including nominals indicating festivals or solar terms: *guoqing jie* ‘National Day’ (the day celebrating the foundation of a country), *ertong jie* ‘Children’s Day’, *qingming jie* ‘Clear and Bright Day/Tomb Sweeping Day’ (the day commemorating the dead);
- (ii) The predicate nominals are with modifiers capable of being predicated of the Davidsonian argument; The modifiers are of two groups:
  - a. Modifiers predicated of the Davidsonian event/state argument innated in the predicate nominals, i.e., non-intersective modifiers, as *lao* ‘old’ in *lao gongren* ‘experienced worker’ and *da* ‘big’ in *da meiren* ‘great beauty’;
  - b. Modifiers predicated of the Davidsonian event/state argument of the relative clause as *xin* ‘new’ in *xin shu* ‘newly published/bought/printed book’, *xian* ‘fresh’ in *xian guozhi* ‘freshly squeezed juice’.
- (iii) The spatio-temporal argument of the nominal predication construction is spelt out. Since Chinese does not possess grammaticalized tense system, the articulation of the spatio-temporal argument cannot appeal to the tense system as the inflectional language does. The spatio-temporal argument is articulated via the following devices:

- a. the occurrence of temporals/locatives including the temporal/locative nominals (or temporal/locative adverbs in D&U-E's sense) like *jintian* 'today', *qunian* 'last year', *zheli* 'here'; durative phrases like *liang nian* 'two years';
- b. the occurrence of temporal adverbs like *cai* 'just', *ganggang* 'just', etc.;
- c. the occurrence of temporal/locative modifiers like *tang chao* 'Tang Dynasty' in *tang chao ren* 'the person of Tang Dynasty', *ligong daxue* 'the Polytechnic University' in *ligong daxue de xuesheng* 'the student of the Polytechnic University';
- d. the application of temporal particles like *le* and *laizhe*;
- e. the interplay between the temporal argument in the nominal predicate and that of the matrix clause like the predicative possessive nominal phrase.

As is observed, the Davidsonian argument is not always present explicitly, it could be hidden in the nominals and requires decomposition to sort it out, or it could be in an implicit form and would be specified contextually. In such a case, the copulaless nominal predication construction has to take advantage of assorted morpho-syntactic devices to spell out the Davidsonian argument due to the lack of the copula and the difficulty to detect the verbal entity, i.e. the Davidsonian argument, in the nominal domain.

The investigation to the nominal predication in Mandarin Chinese has the following implications:

- (i) Nominal predication in Mandarin Chinese is neither distinctive from verbal predication in Chinese nor different from predication in the inflectional languages in that the Davidsonian argument has to be realized to generate a grammatical sentence. If the visibility requirement of the Davidsonian argument is taken as a part of Universal Grammar, then nominal predication in Mandarin Chinese observes the Universal Grammar and is no particular from other types of predication.
- (ii) Since the Davidsonian argument is a verbal entity by nature, the Davidsonian argument in nominal predication is not realized as easily as that in verbal predication. But the examination to the copulaless nominal predication constructions reveals that to generate grammatical sentences, nominal predication has to appeal to all possible morpho-syntactic devices to articulate the Davidsonian argument, especially recourse to elements with [+V] feature, including event nominalization, event modification, and spelt-out of the spatio-temporal argument, etc. Thus, the difference between nominal predication and other kinds of predication hinges on the distinctive devices taken by them in realizing the Davidsonian argument.

## 5.2 Nominal predication in Mandarin Chinese: some remarks

This thesis focuses on three nominal predication constructions whose Davidsonian argument is articulated within TP domain. Actually, there are instances in Mandarin Chinese where the Davidsonian argument of the nominal predication construction is licensed by elements at the syntactic-pragmatic interface, i.e., CP or even elements beyond that. Coincidentally, the licensors of the Davidsonian argument are also distributed at lexical, phrasal or sentential levels. These elements are classified into the following groups:

- (i) licensors of the Davidsonian argument at CP domain, including focal and topic elements, and sentence final particles/wh-words/supersegmental elements denoting illocutionary force:

(1) a. Ta XUESHENG. (focus, stress)

He student

‘It is a student that he is.’

c. Ta SHI XUESHENG.<sup>75</sup> (focus, focus marker)

He Foc student

‘It is a student that he is.’

---

<sup>75</sup> *Shi* in Mandarin Chinese is ambiguous in meaning, which could either be a true verb, a copula or a focus marker. Here it is a focus marker, and the focalized word *xuesheng* ‘student’ should be stressed.

d. Ta XUESHENG, wo LAOSHI. (focus, contrastive context)

He student I teacher

‘He is a student and I am a teacher.’

(2) a. #Zhangsan xuesheng.

Zhangsan xuesheng

‘Zhangsan is a student.’

b. Zhangsan, xuesheng. (topic)

Zhangsan xuesheng

‘Zhangsan, he is a student.’

c. Zhangsan a/ne, xuesheng.

Zhangsan Top xuesheng

‘As for Zhangsan, he is a student.’

(3) a. Ta yisheng ma? (interrogation, SFP)

He doctor MA

‘Is he a doctor?’

b. Zhangsan shenme ren? (interrogation, wh-phrase)

Zhangsan what person

‘Who is he?’

c. Zhangsan xuesheng, dui ma? (interrogation, tag-Q)

Zhangsan student right

‘Zhangsan is a student, isn’t he?’

e. Zhangsan xuesheng ↗? (interrogation, intonation)

Zhangsan student

‘Is Zhangsan a student?’

f. Ta laoshi a/ya! (exclamation, SFP)

Ta teacher A/YA

‘(Wow), he is a teacher!’

- (ii) Elements beyond CP domain, especially discourse-related elements denoting the speaker’s evaluation, including speaker oriented adverbs, evaluative nominals whose values are determined by the speaker’s evaluation and secondary nominal predicates whose values are determined by the evaluations of the matrix subjects:

(4) a. Ta zhende/yexu/queshi/jingran jiaoshou. (speaker-oriented adverbs)

He really/probably/indeed/unexpectedly professor

‘Really/Probably/Indeed/Unexpectedly, he is a professor.’

b. Ta pianzi/shagua. (evaluative nominals)

He swindler/fool

‘He is a swindler/fool.’

c. Wo dang ta shagua ne. (secondary predication)

I consider him fool NE

‘I consider him as a fool (,actually he is not).

Like the three nominal predication constructions discussed in this thesis whose grammaticality depends on the specification of the Davidsonian argument, the legitimacy of the copulaless nominal predication construction listed in this section is also related to the Davidsonian argument, the sentences are acceptable only when their Davidsonian arguments are licensed by the TP external elements. Thus, the Davidsonian argument visibility hypothesis is still in effect.

The detailed study to the nominal predication constructions listed in this section will be left for further discussion.

## CHAPTER 6 CONCLUSION

Nominal predication in Mandarin Chinese has been a controversial issue, ever since Li (1924) first posited that the nominal predication construction in Mandarin Chinese can be grammatical without the support of the copula *shi* 'be'. Taking this topic as the object of study, this thesis intends to answer the following question: whether nominal predication in Mandarin Chinese is a language particular phenomenon, and if not, what properties/characteristics the nominal predication construction shares with the other types of predication, in other words, whether nominal predication in Mandarin Chinese observes the Universal Grammar.

This thesis strives to investigate nominal predication in Mandarin Chinese from the perspective of Davidson's event theory, the focus of which is on three types of nominal predication constructions in Mandarin Chinese: temporal/locative nominal predication construction, modified nominal predication construction and possessive nominal predication construction.

Following Davidsonian (1967), Chierchia (1995) and Kratzer (1995), I propose that each sentence is endowed with a Davidsonian argument, either in the form of an event or a state. In view of this, I argue that each grammatical predicate may be decomposed into two parts: a lexical predicate and an eventuality predicate. The



lexical predicate is used to accommodate the subject while the eventuality predicate the Davidsonian argument. To derive a grammatical sentence, the Davidsonian argument has to be spelt out in a certain way, i.e., the Davidsonian argument visibility hypothesis.

Chapter 2 discusses nominal predication constructions formed by two temporals or locatives. It is observed that only the so-called absolute temporals/locatives à la Ma (1991) are capable of being predicate while the relative temporals/locatives are not. Since the relative temporals/locatives behave differently from the real subject, I assume that this kind of construction has a non-thematic subject and the element on the clause-initial position is an adjunct. Following Jespersen (1932), Larson (1985) and D&U-E's (2004; 2007), the temporals/locatives occurring in the clause initial position are bare NP adverbs with an implicit preposition preceding them. Adopting D&U-E's (2004; 2007) syntactic theory on time arguments and time adverbs, the temporal structure has three temporal arguments: UT-T, AST-T and EV-T, and Tense and Aspect are all spatio-temporal ordering predicates relating two time arguments. The temporal adverb modifying the AST-T/EV-T adjoins to the phrase it modifies and the head of the time adverb P is also a spatio-temporal ordering predicate relating two time arguments. The EV-T, an instantiation of the Davidsonian argument will be defined via temporal predication and modification. This accounts for why the

occurrence of the bare NP adverbs, i.e., the temporals/locatives occurring in the clause initial position, contributes to the grammaticality of the nominal predication construction.

Chapter 3 examines nominal predication constructions whose predicates are modified noun phrases. Modifiers can be roughly divided into two types: intersective and non-intersective. According to Larson (1998), both types of modifiers are predicative in nature, the distinction between them lies in that intersective modifiers are predicated of properties while non-intersective modifiers are predicated of the event argument. Based on this dichotomy, it is observed that only non-intersective can salvage an ungrammatical nominal predication construction while intersective modifiers cannot. Given the claim that non-intersective modifiers are predicated of event argument, it follows that the event argument has to be visible in order to be operated on by the non-intersective modifier and the visibility of the event argument ultimately leads to the grammaticality of the nominal predication construction. Discussions on different kinds of modifiers attest this assumption.

The topic of Chapter 4 is the possessive nominal predicative construction. Different from the predicative nominals discussed above, the predicate nominals in this kind of predicative construction are possessive nouns rather than common nouns, which are syntactically analyzed as DP rather than NP. The distinction between the

possessive phrase and the other DPs lies in that the complement of D is an applicative phrase ApplP instead of an NP. The Appl head denoting the relation between the individuals is instantiated as the genitive marker which introduces an applicative argument, i.e. the possessor into the structure. As suggested by Lecarme (2004; 2008), possessive nominal phrases are parallel to CP in that there are three sets of times involved in the temporal interpretation of noun phrases. Since the predicative possessive phrase is a weak DP (Partee 1983, et seq.; Zamparrelli 1995), neither the time of the existence of the individual nor the individual predicated of by the relational N is closed off by the operator at SpecDP. The temporal variable and the individual variable have to search for their antecedents at sentential level. The Davidsonian argument is realized in the interaction between the temporal argument in the possessive nominal phrases and that of the matrix clause.

With respect to cross-linguistic variations, it seems that Chinese nominal predication is different from English nominal predication in that the copula may be present optionally. Considering the Davidsonian Argument Visibility Hypothesis, Chinese and English are different only in that they take distinctive strategies to realize the Davidsonian argument: English puts all the workload on the spelt-out of tense, while Chinese tends to allocate the task to different elements so long as they have such ability.

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