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漢語中帶一點兒/一些的超越型比較句

The Exceed Comparative with *Yi-dianer*/*Yi-xie* in Mandarin Chinese

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摘要

本篇論文主要探討漢語的「X 稍微 A Y 一點兒/一些」比較句在句法上的表現與語意上的詮釋。這類比較句具有其獨特的表現。例如，度量詞組「一點兒/一些」和程度副詞「稍微」之間有選擇限制，但是彼此不相鄰。此外，度量詞組「一點兒/一些」必須出現，而程度副詞「稍微」和作爲比較對象的指示名詞組可以被刪略。

本篇論文主要討論下列幾個問題。第一，如何在結構中呈現度量詞組「一點兒/一些」和程度副詞「稍微」之間的選擇限制以及不相鄰性。第二，爲什麼在「X 稍微 A Y 一點兒/一些」比較句中度量詞組「一點兒/一些」必須出現。第三，爲什麼在「X 稍微 A Y 一點兒/一些」比較句中程度副詞「稍微」可以被刪略。第四，爲什麼在「X 稍微 A Y 一點兒/一些」比較句中作爲比較對象的指示名詞組可以被刪略。

本篇論文採用 Bhatt & Pancheva (2004)對英語比較句的分析方法和 Liu (2007)對漢語「X A (Y) D」比較句的分析方法，並且提議度量詞組「一點兒/一些」應被視爲變量而由一個加接至 ExP 的隱形量化運符所約束，之後程度副詞「稍微」以反循環的方式合併成爲隱形量化運符的補語。與否定極項和 A-不-A 運符的干涉效應有關的證據支持了此項提議。此外，程度副詞「稍微」作爲隱形量化運符的論元可以被刪略。接著，本篇論文採用 Liu (2007) 對漢語「X A (Y) D」比較句的分析方法，並且提議「X 稍微 A Y 一點兒/一些」比較句帶有隱形動詞後綴 *–ex*，這個動詞後綴是由與之相對應的顯形動詞後綴「-過」語法化而來。語法化使得隱形動詞後綴 *–ex* 的語意內容被消除以致於 *–ex* 無法做一個夠強的謂語來限制形容詞的間距論元，而且 *–ex* 的及物性也變弱。因此，在「X 稍微 A Y 一點兒/一些」比較句中，度量詞組「一點兒/一些」作爲可以限制間距論元的唯一可能候補者必須出現，而作爲比較對象的指示名詞組可以被刪略。最後，本篇論文認爲雖然表示程度淺的第二類程度副詞和表示程度深的第三類程度副詞在格式 I 至格式 IV 的比較句式中都可以和度量詞組「一點兒/一些」共現，但是這些程度副詞在此真正的作用是在限制形容詞的間距論元，所以和度量詞組「一點兒/一些」之間並不存在真正的選擇關係(參照 Lu & Ma 1999)。相同的現象也出現在帶有「比」-成分和度量詞組「一點兒/一些」的「比」字比較句中。

關鍵詞：度量詞組；程度副詞；反循環合併；隱形動詞後綴；間距論元

The Exceed Comparative with *Yi-dianer*/*Yi-xie* in Mandarin Chinese

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Abstract

The purpose of this thesis is to study the syntactic representation and semantic interpretation of the X *shaowei* A Y *yi-dianer/yi-xie* comparative. This type of comparative has its unique syntactic and semantic properties. More specifically, there are selectional restrictions between the measure phrase *yi-dianer/yi-xie* 'a little' and the degree adverb *shaowei* 'slightly', but it is not possible for *yi-dianer/yi-xie* 'a little' and *shaowei* 'slightly' to appear together. Beside, *yi-dianer/yi-xie* 'a little' is obligatorily required while *shaowei* 'slightly' and the referential NP functioning as the target of comparison are optionally required.

In this thesis, we deal with the following questions that any analysis of the X *shaowei* A Y *yi-dianer/yi-xie* comparative must address: First, how can we accommodate the selectional restrictions between *yi-dianer*/*yi-xie* 'a little' and *shaowei* 'slightly' as well as the obligatory nonadjacency between *yi-dianer*/*yi-xie* 'a little' and *shaowei* 'slightly' in a single structure? Second, why is *yi-dianer/yi-xie* 'a little' obligatorily required in the X *shaowei* A Y *yi-dianer/yi-xie* comparative? Third, why is *shaowei* 'slightly' optionally required in the X *shaowei* A Y *yi-dianer/yi-xie* comparative? Fourth, why is the referential NP functioning as the target of comparison optionally required in the X *shaowei* A Y *yi-dianer/yi-xie* comparative?

Following Bhatt and Pancheva's (2004) analysis of English comparatives and Liu's (2007) analysis of the X A (Y) D comparative, we propose that *shaowei* 'slightly' is merged countercyclically as the complement of the covert quantificational operator binding *yi-dianer/yi-xie* 'a little', which is treated as a variable, after the covert quantificational operator adjoins to ExP. This proposal is supported by the evidence related to intervention effects on NPIs and A-not-A operators. Moreover, *shaowei* 'slightly', which is the syntactic argument of the covert quantificational operator, is optionally required in the X *shaowei* A Y *yi-dianer/yi-xie* comparative. Then, following Liu's (2007) analysis of the X A (Y) D comparative, we propose that the X *shaowei* A Y *yi-dianer/yi-xie* comparative contains the covert verbal suffix *–ex*, which is grammaticalized from its overt counterpart *–guo* 'exceed'.

Grammaticalization makes the semantic content of *–ex* bleached to such an extent that *–ex* cannot function as a predicate strong enough to restrict the interval argument of the adjective. This makes *yi-dianer/yi-xie* 'a little', which is the only expression available to restrict the interval argument of the adjective, obligatorily required in the X *shaowei* A Y *yi-dianer/yi-xie* comparative. Grammaticalization also makes the semantic content of the covert verbal suffix *–ex* so bleached that the transitivity force of *–ex* is weak. This makes the referential NP functioning as the target of comparison optionally required in the X *shaowei* A Y *yi-dianer/yi-xie* comparative. Finally, we argue that although both degree adverbs belonging to the weak group of the second type and degree adverbs belonging to the strong group of the third type can take *yi-dianer*/*yi-xie* 'a little' as a post-adjectival pseudo-object in Type I-IV comparative constructions, these degree adverbs restrict the interval argument of the adjective instead of having a selectional relation with *yi-dianer*/*yi-xie* 'a little' (see Lu and Ma 1999). Likewise, in Chinese *bi* comparatives which contain the *bi*-constituent and *yi-dianer*/*yi-xie* 'a little', the degree adverb saturates the interval argument of the adjective rather than have a selectional relation with *yi-dianer*/*yi-xie* 'a little'.

Keywords: measure phrase; degree adverb; countercyclic merger; covert verbal suffix; interval argument

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Chapter 1

Introduction

Almost all the previous studies on Chinese comparatives concentrate on examples like (1), which contains the marker *bi* ‘compare’ (cf. Chao 1968, Li and Thompson 1981, Tsao 1989, Hong 1991, Paul 1993, Hsing 2003, and many others).

(1) Lisi bi Wangwu gao wu gongfen.
Lisi compare Wangwu tall five centimeter
‘Lisi is five centimeters taller than Wangwu.’

However, in Mandarin Chinese there exists another type of comparative like (2), which is seldom studied by scholars (henceforth the X *shaowei* A Y *yi-dianer/yi-xie* comparative).

(2) Lisi shaowei gao Wangwu yi-dianer/yi-xie.
Lisi slightly tall Wangwu a-little/a-little
‘Lisi is a little bit taller than Wangwu.’

This type of comparative has its unique syntactic and semantic properties. More specifically, the measure phrase *yi-dianer/yi-xie* ‘a little’, as (3) shows, cooccurs with the degree adverb *shaowei* ‘slightly’. In other words, there are selectional restrictions between the measure phrase *yi-dianer/yi-xie* ‘a little’ and the degree adverb *shaowei* ‘slightly’.

(3) Lisi *hen/*zui/*geng/*youdianer/*bijiao/shaowei gao Wangwu

Lisi very/the.most/even.more/a.bit/comparatively/slightly tall Wangwu

yi-dianer/yi-xie.

a-little/a-little

'Lisi is a little bit taller than Wangwu.'

Besides, the measure phrase *yi-dianer/yi-xie* 'a little' is obligatorily required while the degree adverb *shaowei* 'slightly' and the referential NP functioning as the target of comparison are optionally required, as examples in (4) illustrate.

(4) a. Lisi shaowei gao Wangwu *(yi-dianer/yi-xie).

Lisi slightly tall Wangwu a-little/a-little

'Lisi is a little bit taller than Wangwu.'

b. Lisi (shaowei) gao (Wangwu) yi-dianer/yi-xie.

Lisi slightly tall Wangwu a-little/a-little

'Lisi is a little bit taller than Wangwu.'

The purpose of this thesis is to study the syntax and semantics of the X *shaowei* A Y *yi-dianer/yi-xie* comparative. We propose that the degree adverb *shaowei* 'slightly' is merged late as the complement of the covert quantificational operator binding *yi-dianer/yi-xie* 'a little', which is treated as a variable, after the covert quantificational operator adjoins in a scope position. In addition, we propose that the X *shaowei* A Y *yi-dianer/yi-xie* comparative contains the covert verbal suffix *–ex*, which is grammaticalized from its overt counterpart *–guo* 'exceed'.

This thesis proceeds as follows. In Chapter 2, we will discuss the syntactic and semantic characteristics of the X *shaowei* A Y *yi-dianer/yi-xie* comparative, and then point out the questions that any analysis of this construction has to account for. We

then undertake a literature review of previous works on the Chinese comparative construction without the marker *bi* 'compare' in Chapter 3. In Chapter 4, we propose the syntactic and semantic analyses of the X *shaowei* A Y *yi-dianer/yi-xie* comparative. In Chapter 5, we account for the cooccurrence of the measure phrase *yi-dianer*/*yi-xie* 'a little' and degree adverbs belonging to the weak group of the second type and the strong group of the third type in Type I-IV comparative constructions, and that of the measure phrase *yi-dianer*/*yi-xie* 'a little' and *bi*-constituents in Chinese *bi* comparatives (see Lu and Ma 1999). Finally, the concluding remarks will be stated in Chapter 6.

Chapter 2

The Characteristics of the X *Shaowei* A Y *Yi-dianer/Yi-xie* Comparative

The X *shaowei* A Y *yi-dianer/yi-xie* comparative has the following syntactic and semantic characteristics. First, as Chao (1968: 314, 690-691) points out, the predicative adjective (or predicative stative quality verb) in this type of comparative takes two complements: an indirect-object-like referential NP complement (e.g. *Zhaoying* in (5a)), and a quantity-/extent-denoting cognate object (henceforth the measure phrase) (e.g. *yi-dianer* 'a little' in (5a)).

(5) a. Wangwu showei gao/ai Zhaoying yi-dianer.
Wangwu alightly tall/short Zhaoying a-little
'Wangwu is a little bit taller/shorter than Zhaoying.'

b. Wangwu shaowei pan/shou Zhaoying yi-xie.
Wangwu slightly fat/thin Zhaoying a-little
'Wangwu is a little bit fatter/thinner than Zhaoying.'

The indirect-object-like referential NP complement functions to provide the target of comparison, and the measure phrase shows the differential between the two compared degree values along the scale denoted by the adjectival predicate.

Second, the measure phrase *yi-dianer*/*yi-xie* 'a little' cooccurs with the degree adverb *shaowei* 'slightly', as shown in (6). In other words, there are selectional restrictions between the measure phrase *yi-dianer*/*yi-xie* 'a little' and the degree adverb *shaowei* 'slightly'. Since selectional restrictions are the hallmark of head-argument relationships, it is reasonable to conclude that the degree adverb *shaowei* 'slightly' is the syntactic argument of the measure phrase *yi-dianer*/*yi-xie* 'a

little’.

(6) a. Wangwu shaowei gao Zhaoying yi-dianer.

Wangwu slightly tall Zhaoying a-little

‘Wangwu is a little bit taller than Zhaoying.’

b. Wangwu shaowei pan Zhaoying yi-xie.

Wangwu slightly fat Zhaoying a-little

‘Wangwu is a little bit taller than Zhaoying.’

c. *Wangwu hen/zui/geng/youdianer/bijiao gao Zhaoying

Wangwu very/the.most/even.more/a.bit/comparatively tall Zhaoying

yi-dianer.

a-little

d. *Wangwu hen/zui/geng/youdianer/bijiao pan Zhaoying

Wangwu very/the.most/even.more/a.bit/comparatively fat Zhaoying

yi-xie.

a-little

However, it is not possible for the measure phrase *yi-dianer*/*yi-xie* ‘a little’ and the degree adverb *shaowei* ‘slightly’ to appear together.

(7) a. *Wangwu gao Zhaoying [yi-dianer shaowei].

Wangwu tall Zhaoying a-little slightly

b. *Wangwu pan Zhaoying [yi-xie shaowei].

Wangwu fat Zhaoying a-little slightly

Third, the measure phrase *yi-dianer/yi-xie* ‘a little’ is obligatorily required in

the X *shaowei* A Y *yi-dianer/yi-xie* comparative, as examples in (8-9) illustrate.

(8) a. Wangwu shaowei gao Zhaoying yi-dianer.

Wangwu slightly tall Zhaoying a-little

'Wangwu is a little bit taller than Zhaoying.'

b. *Wangwu shaowei gao Zhaoying.

Wangwu slightly tall Zhaoying

(9) a. Wangwu shaowei pan Zhaoying yi-xie.

Wangwu slightly fat Zhaoying a-little

'Wangwu is a little bit fatter than Zhaoying.'

b. *Wangwu shaowei pan Zhaoying.

Wangwu slightly fat Zhaoying

Fourth, the degree adverb *shaowei* 'slightly', which functions to weaken the differential between the compared degree values (see Zhang 2002: 145), is optionally required in the X *shaowei* A Y *yi-dianer/yi-xie* comparative, as examples in (10-11) indicate.

(10) a. Wangwu shaowei gao Zhaoying yi-dianer.

Wangwu slightly tall Zhaoying a-little

'Wangwu is a little bit taller than Zhaoying.'

b. Wangwu gao Zhaoying yi-dianer.

Wangwu tall Zhaoying a-little

'Wangwu is a little bit taller than Zhaoying.'

(11) a. Wangwu shaowei pan Zhaoying yi-xie.

Wangwu slightly fat Zhaoying a-little

‘Wangwu is a little bit fatter than Zhaoying.’

b. Wangwu pan Zhaoying yi-xie.

Wangwu fat Zhaoying a-little

‘Wangwu is a little bit fatter than Zhaoying.’

Fifth, the referential NP functioning as the target of comparison is optionally required in the X *shaowei* A Y *yi-dianer/yi-xie* comparative, as examples in (12-13) indicate.

(12) a. Wangwu shaowei gao Zhaoying yi-dianer.

Wangwu slightly tall Zhaoying a-little

‘Wangwu is a little bit taller than Zhaoying.’

b. Wangwu shaowei gao yi-dianer.

Wangwu slightly tall a-little

‘Wangwu is a little bit taller.’

(13) a. Wangwu shaowei pan Zhaoying yi-xie.

Wangwu slightly fat Zhaoying a-little

‘Wangwu is a little bit fatter than Zhaoying.’

b. Wangwu shaowei pan yi-xie.

Wangwu slightly fat a-little

‘Wangwu is a little bit fatter.’

Sixth, the X *shaowei* A Y *yi-dianer/yi-xie* comparative involves explicit comparison. Kennedy (2007) broadly identifies two different possible strategies that a language can employ to make comparisons. Following Sapir (1944), Kennedy (2007) calls these strategies implicit comparison and explicit comparison, defined as follows.

(14) a. Implicit comparison

Establish an ordering between objects *x* and *y* with respect to gradable property *g* using the positive form by manipulating the context in such a way that the positive form true of *x* and false of *y*.

b. Explicit comparison

Establish an ordering between objects *x* and *y* with respect to gradable property *g* using a morphosyntactic form whose conventional meaning has the consequence that the degree to which *x* is *g* exceeds the degree to which *y* is *g*.

English constructions involving the comparative morpheme *more*/*–er*, such as (15), are examples of explicit comparison; while those involving taking advantage of the inherent context sensitivity of the positive form adjective, such as (16), are examples of implicit comparison.

(15) Bill is taller than John.

(16) Compared to John, Bill is tall.

By means of a number of distinctions between implicit comparison and explicit comparison that Kennedy (2007) outlines, the following set of facts shows that the X *shaowei* A Y *yi-dianer/yi-xie* comparative involves explicit comparison. (A) Explicit comparison in (17a) simply requires an asymmetric ordering between the degrees to which two articles are long while implicit comparison in (17b) requires that the degree to which the first article is long should exceed the degree to which the second article is long by a significant amount; therefore, (17a) is felicitous in the context involving a crisp judgment while (17b) cannot possibly be true in the context

involving very slight differences between the compared objects. The X *shaowei* A Y *yi-dianer/yi-xie* comparative is a type of explicit comparative construction since it is felicitous in crisp judgment contexts. For example, (17c) is a perfectly good way of describing the relation between a 300 word article and a 296 word article.

(17) Context: A 300 word article and a 296 word article

a. This article is longer than that one.

b. ??Compared to that article, this one is long.

c. Zhe-pian wenzhang shaowei chang na-pian wenzhang yi-xie.

this-CL article slightly long that-CL article a-little

'This article is a little bit longer than that one.'

(B) Measure phrases are acceptable with explicit comparatives rather than implicit comparatives since composition of a measure phrase and a gradable adjective generates a predicate that is not context-dependent, as (18a-b) illustrate. The example in (18c) allows the measure phrase *yi-dianer* 'a little', which is assigned the differential interpretation. This fact again points to the conclusion that the X *shaowei* A Y *yi-dianer/yi-xie* comparative involves explicit comparison.

(18) a. ??Compared to John, Bill is 5cm tall.

b. Bill is 5cm taller than John.

c. Wangwu shaowei gao Zhaoying yi-dianer.

Wangwu slightly tall Zhaoying a-little

'Wangwu is a little bit taller than Zhaoying.'

Discussions above immediately bring us to the following questions that any

analysis of the X *shaowei* A Y *yi-dianer/yi-xie* comparative has to address: First, how can we accommodate the selectional restrictions between the measure phrase *yi-dianer*/*yi-xie* ‘a little’ and the degree adverb *shaowei* ‘slightly’ as well as the obligatory nonadjacency between *yi-dianer*/*yi-xie* ‘a little’ and *shaowei* ‘slightly’ in a single structure? Second, why is the measure phrase *yi-dianer/yi-xie* ‘a little’ obligatorily required in the X *shaowei* A Y *yi-dianer/yi-xie* comparative? Third, what is the reason that the degree adverb *shaowei* ‘slightly’ is optionally required in the X *shaowei* A Y *yi-dianer/yi-xie* comparative? Fourth, why is the referential NP functioning as the target of comparison optionally required in the X *shaowei* A Y *yi-dianer/yi-xie* comparative?

Chapter 3

Literature Review

3.1 Introduction

In this chapter, previous works on the Chinese comparative construction without the marker *bi* 'compare' are reviewed. Section 3.2 begins with Chao's (2005) analysis that the structure of the Chinese comparative construction without the marker *bi* 'compare' is similar to the structure of English double-object constructions proposed by Larson (1998). In section 3.3, Xiang's (2005) proposal of a revised Larsonian (1991) style DegP-shell structure for the Chinese comparative construction without the marker *bi* 'compare' is presented. In section 3.4, Erlewine's (2007) claim that the syntax of the *bi*-comparative can be extended to the Chinese comparative construction without the marker *bi* 'compare' is introduced. Finally, Liu's (2007) analysis that the X A (Y) D comparative contains a covert weak comparative morpheme grammaticalized from the verbal suffix *–guo1* 'exceed' in the X A-*guo1*Y (D) comparative is presented in section 3.5.

3.2 Chao (2005)

According to Chao (2005), comparative constructions like (19) are termed comparatives with a double-object-like construction. This type of comparative contains a gradable adjective which functions as the main predicate, and the two NPs following it denote the target of comparison and the differential between the two compared degree values respectively.

(19) a. Zhangsan gao Lisi san gongfen.

Zhangsan tall Lisi three centimeter

‘Zhangsan is three centimeters taller than Lisi.’

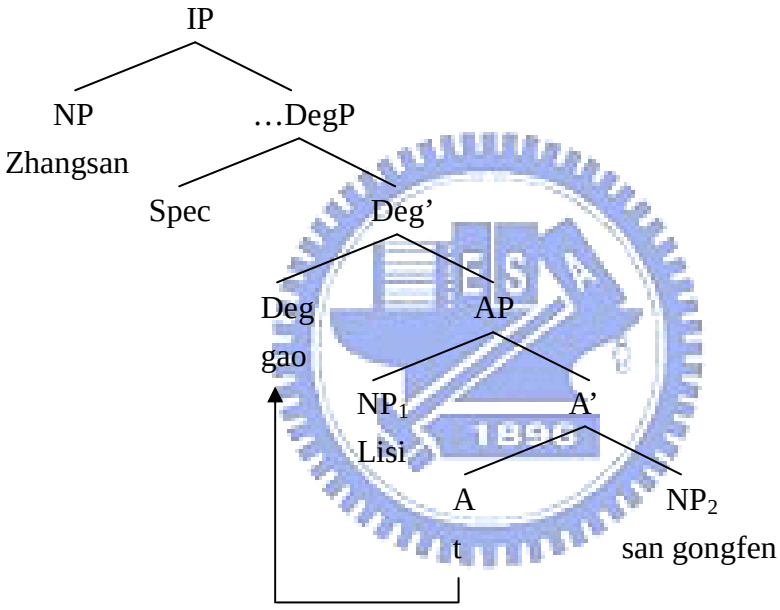
b. Zhangsan da Lisi san sui.

Zhangsan old Lisi three year

‘Zhangsan is three years older than Lisi.’

Chao (2005) proposes that the adjective in (19a) projects as an “extended functional structure” whose head is Deg, as (20) below shows (cf. Abney 1987).

(20)



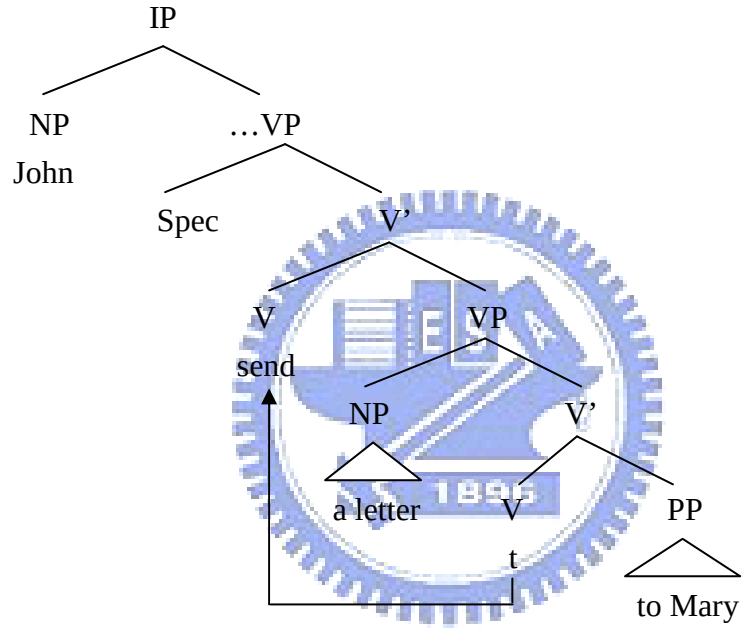
The referential NP functioning as the target of comparison occurs in [Spec, AP] and the measure phrase denoting the differential between the two compared degree values is inside A’. The adjectival head overtly moves to the head position of DegP due to some kind of feature checking.

Despite the similarity between the syntactic structure of comparatives with a double-object-like construction proposed by Chao (2005) and that of English double-object constructions proposed by Larson (1998) in (21), there exist some distinctions between them. First, the two internal arguments of English double-object

constructions are NP and PP respectively while those of comparatives with a double-object-like construction are both NPs. Second, both internal arguments of English double-object constructions cannot be omitted while in comparatives with a double-object-like construction the internal referential argument is optionally required and the internal non-referential argument is obligatorily required, as shown in (22-23).

(21) a. John sent a letter to Mary.

b.



(22) a. John sent *(a letter) to Mary.

b. John sent a letter *(to Mary).

(23) a. Zhangsan gao (Lisi) san gongfen.

Zhangsan tall Lisi three centimeter

'Zhangsan is three centimeters taller than Lisi.'

b. Zhangsan gao Lisi *(san gongfen).

Zhangsan tall Lisi three centimeter

'Zhangsan is three centimeters taller than Lisi.'

However enlightening Chao's (2005) analysis of comparatives with a

double-object-like construction is, there remain some problems that Chao's (2005) analysis fails to account for. First, Chao (2005) does not point out explicitly what feature is checked when the adjective moves to the head position of DegP. Besides, Chao (2005) does not explain why the occurrence of the internal referential NP is optional while that of the internal non-referential NP is obligatory.

3.3 Xiang (2005)

Xiang (2005) calls the type of superiority comparative like the sentence in (24a) the bare comparative. Xiang (2005) points out that in the bare comparative the measure phrase denoting the differential is obligatorily required, as shown by the contrast between (24a) and (24b).

(24) a. Wo gao Lisi liang-cun.
I tall Lisi two-inch
'I am two inches taller than Lisi.'
b. *Wo gao Lisi.
I tall Lisi

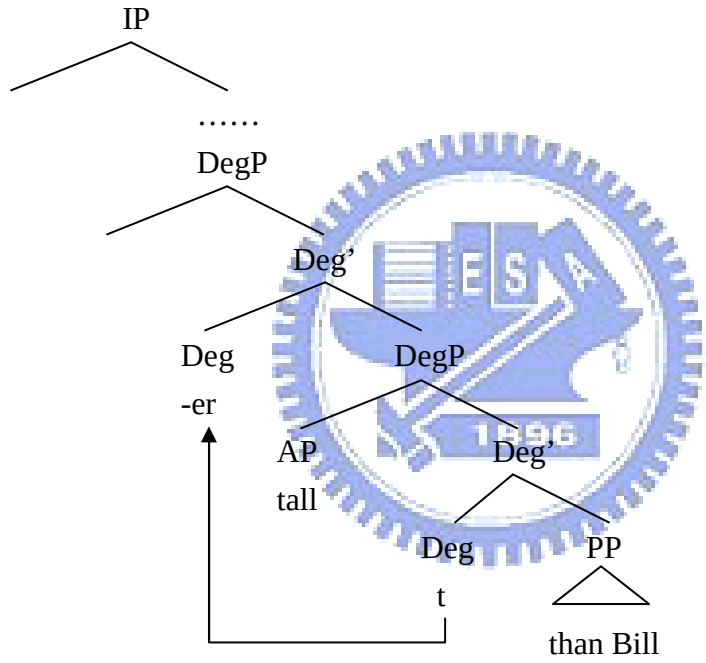
Xiang (2005) suggests that the argument structure of bare comparatives is similar to an English double-object construction, in the sense that they both have two internal arguments that have to stand in an asymmetric c-commanding relation.[1] [2] As

[1] Larson (1988) argues that the asymmetric c-commanding relation accounts for a number of important asymmetries between two objects, as illustrated in (i), where a bound pronoun must be c-commanded by its binder.
(i) a. I gave every worker$_i$ his$_i$ paycheck.
b. *I gave its$_i$ owner every paycheck$_i$.

[2] Xiang (2005) points out that bare comparatives show variable binding facts that indicate the referential NP functioning as the target of comparison should asymmetrically c-command the differential measure phrase, as illustrated in (i), where *half* contains an implicit argument.
(i) Zhe-gen shengzi chang na-gen shengzi yiban.
this-CL rope long that-CL rope half

shown in (25), Larson's (1991) DegP-shell structure for English comparatives looks like the VP-shell analysis of English double-object constructions. Therefore, Larson's (1991) DegP-shell structure looks promising to capture the structure of bare comparatives. To keep the essence of the DegP-shell structure and at the same time make the degree argument an argument of the adjective, Xiang (2005) proposes a revised Larsonian (1991) style DegP-shell structure for bare comparatives in Chinese, as shown in (26).[3]

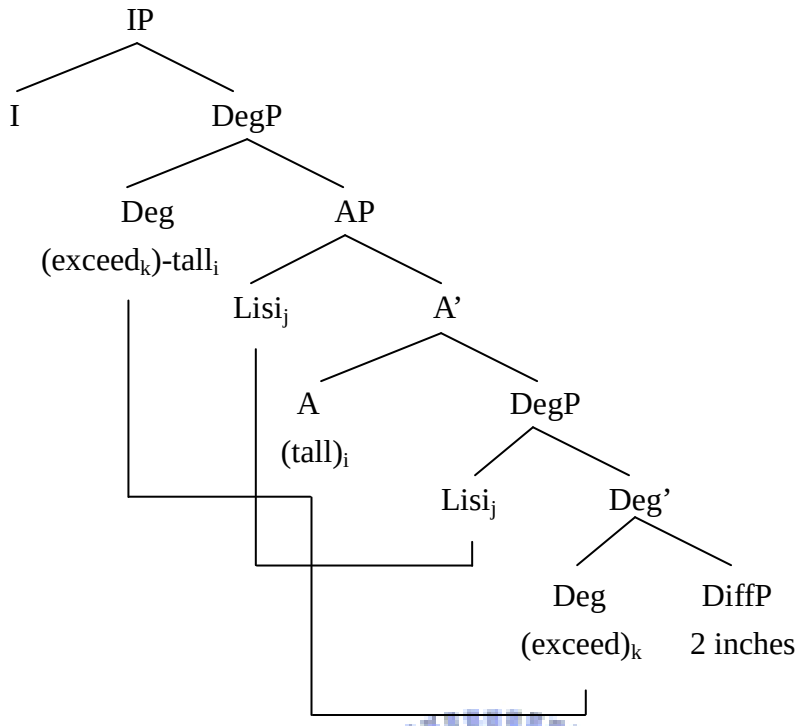
(25)



'This rope$_i$ is longer than that rope$_j$ by half (of that rope*$_{i/j}$).'

[3] Since the adjective *tall* maps an individual to a degree of height, the sentence *John is taller than Bill* means *John is [-er than Bill] tall*, with *[-er than Bill]* as the degree argument of the adjective. Xiang (2005) points out that the degree head *–er* and the *than*-phrase are viewed as a constituent in the DegP-shell structure in (25); however, that *[-er than Bill]* is an argument of the adjective *tall* is not reflected in the structure in (25).

(26)



Xiang (2005) assumes the phonetically null degree morpheme *exceed*, which merges with the referential NP functioning as the target of comparison and the differential measure phrase first. The phonetically null degree morpheme *exceed* internally merges with the adjective through head movement, and the referential NP *Lisi* moves to the [Spec, AP] position for EPP feature checking. Finally, in order to introduce the external argument, the complex head *exceed-tall* moves to the higher Deg-head through head movement.

Xiang (2005) suggests that the analysis of the bare comparative in terms of a DegP-shell structure has the following consequences. The first consequence concerns the reduplication of the adjectival predicate. In overt movement, it is usually the highest copy in the chain that is spelled out, and the deletion of other copies is analyzed by Nunes (1996, 1999) as the result of PF linearization considerations. According to Kayne's (1994) Linear Correspondence Axiom (LCA), X precedes Y at Pf if X asymmetrically c-commands Y in a syntactic structure. In (27) the higher copy *John* is asymmetrically c-commanding the lower copy. To spell out both copies in (27)

would lead to a contradictory result that *John* is preceding *John* itself because the two are non-distinct copies. However, example (28), in which the adjectival predicate is reduplicated, seems to suggest that more than one copy involved in the head movement of the comparative can be spelled out. This is possible because the lower copy of *tall* is housed within a reformed word *tall-not-particle* and LCA does not linearize strings word-internally but at the word level. (cf. Chomsky 1995).

(27) a. **John** was invited ~~**John**~~. (spell out the higher copy)

b. * ~~**John**~~ was invited **John**. (spell out the lower copy)

(28) Zhangsan gao Lisi gao bu liao yi-diandian.

Zhangsan tall Lisi tall not particle a-little

'Zhangsan isn't much taller than Lisi.'

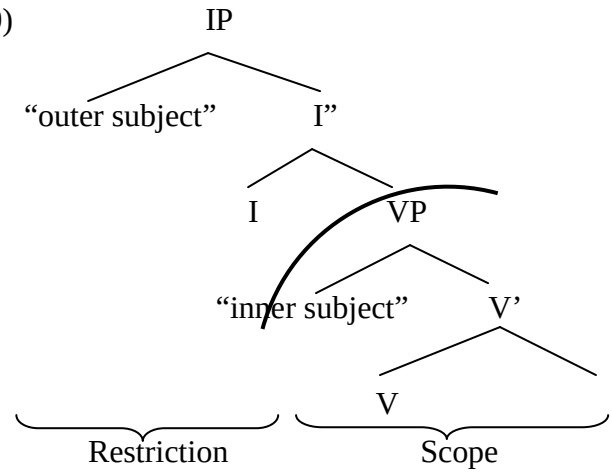
The second consequence is related to the fact that the referential NP functioning as the target of comparison in the bare comparative cannot have a generic reading. To account for the ambiguity of the subject DP of a stage-level predicate in (29), Diesing (1992) suggests that there is a mapping between the clausal structure and the logical representation, namely, the VP structure consists of the nuclear scope, and the residue structure is the restriction, as shown in (30). Diesing (1992) assumes that the subject DP in (29) can be mapped to either the restriction to receive the generic reading or the scope to receive the existential reading, as shown by the two subject positions in (30).

(29) Firemen are available.

a. $\exists_x$ [x is a fireman][x is available]

b. $Gen_{x,\ t}$ [x is a fireman and t is a time][x is available at t]

(30)

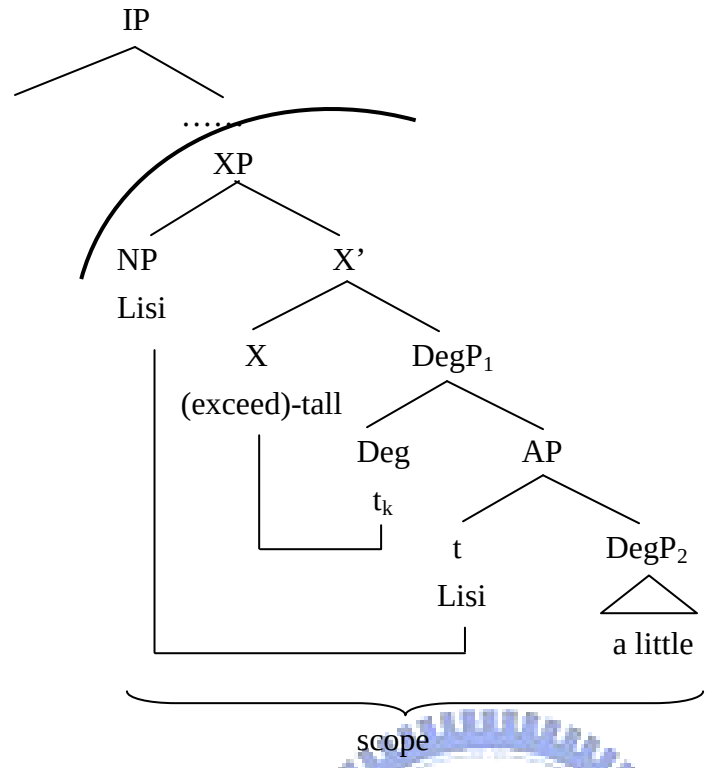


Based on Diesing's (1992) mapping hypothesis, Xiang (2005) explains the observation in (31). As shown in (32), at LF, the the referential NP functioning as the target of comparison moves to [Spec, XP] to check case, and the adjectival head (plus the phonologically null degree head) moves to the higher functional head X^0 position. The referential NP functioning as the target of comparison always stays within the scope whose boundary is determined by the position of the adjective and will be interpreted existentially. Therefore, the bare comparative does not allow a generic reading of the referential NP functioning as the target of comparison.

(31) a. *Zhe-zhi gang-chusheng de xiao luotuo da ma yi-dian.
this-CL just-born DE little camel big horse a-little
'This new-born camel is a little bigger than a horse.'

b. Zhe-zhi gang- chusheng de xiao luotuo da na-pi ma yi-dian.
this-CL just-born DE little camel big that-CL horse a-little
'This new-born camel is a little bigger than that horse.'

(32)



However insightful Xiang's (2005) revised Larsonian (1991) style DegP-shell analysis of bare comparatives is, there still exist some problems that Xiang's (2005) analysis fails to account for. First, Xiang (2005) does not explain why measure phrases are always obligatory in bare comparatives. Second, what triggers the movement of the phonetically null degree morpheme *exceed* to the adjective and the movement of the complex head *exceed-tall* to the higher Deg-head?

3.4 Erlewine (2007)

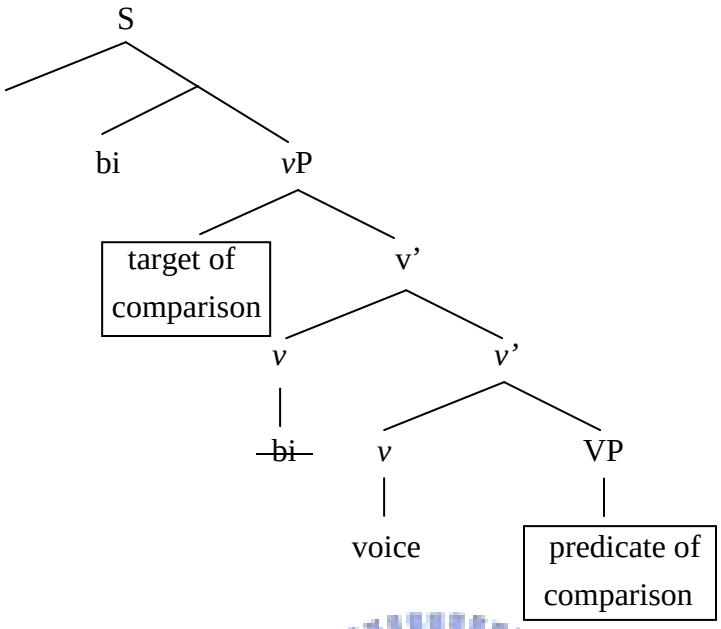
Syntactically, Erlewine (2007) argues that *bi* in the *bi*-comparative such as (33) is a verbal functional head subcategorizing for a voice *v'* which, in turn, subcategorizes for the predicate of comparison, as shown in (34). The lower *bi* in (34) undergoes head movement to derive the correct surface word order.

(33) Yuehan bi Mali xihuan Tangmu.

John bi Mary like Tom

'John likes Tom more than Mary does.'

(34)



Erlewine (2007) provides evidence for the *v*P-shell structure of the *bi*-comparative. First, *bi* and the referential NP functioning as the target of comparison do not seem to form a constituent since the referential NP functioning as the target of comparison cannot be dislocated with or without stranding *bi*, as shown in (35).

(35) a. *Mali, Yuehan bi gao.

Mary, John bi tall

b. *Bi Mali, Yuehan gao.

bi Mary, John tall

Second, negation normally occurs right before the verb phrase (or the adjective phrase) in Mandarin Chinese, as shown in (36), where the adjunct *dui*-phrase is involved. If *bi* were in an adjunct position, a negation marker would be expected to surface immediately before the predicate of comparison. The position of negation,

however, is crucially before *bi*, as shown in (37).

(36) Yuehan *bu dui Mali √bu diu qiu.
John *Neg toward Mary √Neg throw ball
'John does not throw balls toward Mary.'

(37) Wo √bu bi ta *bu gao.
1sg √Neg bi 3sg *Neg tall
'I am not taller than him.'

The third piece of evidence concerns the distribution of the distributive quantifier *ge* 'each'. Based on Soh's (2005) assumption that *ge* 'each' can adjoin to a VP or *v*P node, Erlewine (2007) has shown that *ge* 'each' may appear before either the *bi*-phrase (*v*P) as in (38a) or the predicate of comparison (VP) as in (38b).

(38) a. Women ge bi san-ge ren gao wu fen.
1pl each bi three-CL person tall five point
'Each of us was five points higher than three people.'
b. Wo bi tamen ge gao wu fen.
1sg bi 3pl each high five point
'I was five points higher than each of them.'

Fourth, Erlewine (2007) argues that the referential NP functioning as the target of comparison c-commands the predicate of comparison since an argument in the predicate of comparison can be bound by the referential NP functioning as the target of comparison, as shown in (39).

(39) Yuehan$_i$ bi Mali$_j$ xihuan ziji$_{i/j}$.

John$_i$ bi Mary$_j$ like self$_{i/j}$

'John$_i$ likes himself$_i$ more than Mary$_j$ likes herself$_j$.'

'John$_i$ likes himself$_i$ more than Mary$_j$ likes him$_i$.'

Finally, Erlewine (2007) indicates that the comparison operates above voice and voice may not act above comparison because comparison and passivization may cooccur on condition that the *bi*-phrase surfaces before the *bei*-phrase, as the contrast between (40a) and (40b) shows.

(40) a. Yuehan bi Tangmu bei Mali zunjing.

John bi Tom bei Mary respect

'John is respected by Mary more than Tom is.'

b. *Yuehan bei Mali bi (bei) Tangmu zunjing.

John bei Mary bi bei Tom respect

intended: 'John is respected by Mary more than by Tom.'

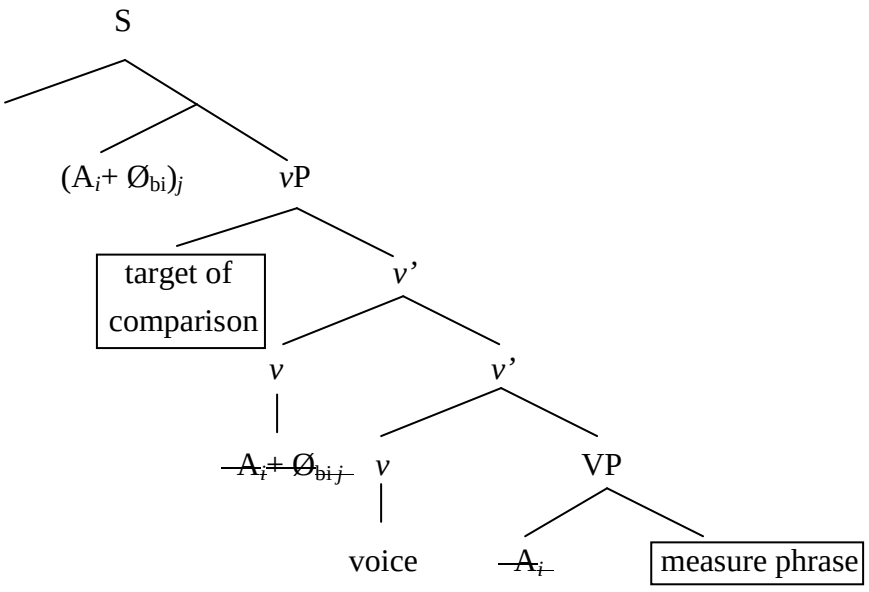
Erlewine (2007) further argues that the syntax of the *bi*-comparative can be extended to the transitive comparative like (41). Erlewine (2007) proposes that there is a phonologically-null version of *bi* which has approximately the same semantics as *bi* but triggers the A to *v* movement in the transitive comparative. Thus, the syntactic configuration of the transitive comparative is as shown in (42).

(41) Yuehan gao Mali *(shi gaongfen).

John tall Mary ten centimeter

'John is ten centimeters taller than Mary.'

(42)



Erlewine (2007) notes that in the transitive comparative the measure phrase is obligatorily required. However, Erlewine (2007) does not give any explanation with regard to this property of the transitive comparative. In addition, Erlewine (2007) does not state explicitly the motivations for the movement involved in the *bi*-comparative and the transitive comparative.

3.5 Liu (2007)

Liu (2007) proposes that the comparative construction such as (43a) (henceforth the X A (Y) D comparative) contains the weak covert verbal suffix *–guo2*, which is grammaticalized from the verbal suffix *–guo1*, meaning 'exceed', in the X A-*guo1* Y (D) comparative like (43b). Liu (2007) underlines the affinity between these two types of comparatives in syntax and semantics.

(43) a. Zhangsan gao (Lisi) san gongfen.

Zhangsan tall Lisi three centimeter

'Zhangsan's height exceeds Lisi's by three centimeters.'

b. Zhangsan gao-guo1 Lisi (san gongfen).

Zhangsan tall-guo1 Lisi three centimeter

'Zhangsan's height exceeds Lisi's by three centimeters.'

First of all, in the X A-*guo1* Y (D) comparative, the verbal suffix *–guo1* 'exceed', being a three-place predicate syntactically, denotes a four-place relation semantically: A relation between two comparison items (i.e. X and Y of the X A-*guo1* Y (D) comparative), a dimension and a measure phrase; therefore, the two comparison items and the measure phrase can be considered the arguments of *–guo1* 'exceed'. Although no verbal suffix *–guo1* 'exceed' is found in the X A (Y) D comparative, semantically this type of comparative also expresses the meaning of 'X exceeds/surpasses Y by D in the dimension denoted by A'.

Second, the adjective in the X A-*guo1* Y (D) comparative must be a [+pole] dimensional adjective or a positive value adjective since the *exceeding* or *surpassing* meaning of *–guo1* 'exceed' implies the "upward ordering" along the scale, as the contrast below illustrates (cf. Bierwisch 1989).

(44) a. Zhe-tiao shengzi chang-guo1 na-tiao liang yingchi.

this-CL rope long-guo1 that-CL two inch

'The length of this rope exceeds that of that rope by two inches.'

b. *Zhe-tiao shengzi duan-guo1 na-tiao liang yingchi.

this-CL rope short-guo1 that-CL two inch

Nevertheless, the adjective in the X A (Y) D comparative must be a dimensional adjective, either [+pole] or [-pole], with a dimension measurable by a standardized measure unit fixed as a gauge for measuring the scale, as examples in (45) illustrate (cf. Bierwisch 1989).

(45) a. Zhe-ben shu gui/pianyi na-ben yi-bai-kui qian.

this-CL book expensive/cheap that-CL one-hundred-CL dollar

'This book is one hundred dollars more expensive/cheaper than that one.'

b. *Zhe-ge nuhai piaoliang na-ge nuhai san du.

this-CL girl beautiful that-CL girl three degree

'This girl is three more degrees beautiful than that one.'

Third, in the X A-*guo1* Y (D) comparative, the internal comparison item must be a definite/specific (or referential) noun phrase whereas the measure phrase must be non-referential, as the contrast in (46) illustrates. Furthermore, the internal referential comparison item must precede the non-referential measure phrase in the linear order.

(46) a. Zhangsan gao-guo1 Lisi shi gongfen.

Zhangsan tall-guo1 Lisi ten centimeter

'Zhangsan is ten centimeters taller than Lisi.'

b. *Zhangsan gao-guo1 liang mi shi gongfen.

Zhangsan tall-guo1 two meter ten centimeter

c. *Zhangsan gao-guo1 shi gengfen Lisi.

Zhangsan tall ten centimeter Lisi

Fourth, in the X A-*guo1* Y (D) comparative, the presence of the internal comparison item is obligatory while the presence of the measure phrase is optional; however, the occurrence of the internal comparison item is optional while the occurrence of the measure phrase is obligatory in the X A (Y) D comparative, as shown by the contrast below.

(47) a. Zhangsan gao-guo1 Lisi (shi gongfen).

Zhangsan tall-guo1 Lisi ten centimeter

'Zhangsan's height exceeds Lisi's by ten centimeters.'

b. Zhangsan gao-guo1 *(Lisi) shi gongfen.

Zhangsan tall-guo1 Lisi ten centimeter

'Zhangsan's height exceeds Lisi's by ten centimeters.'

(48) a. Zhangsan gao (Lisi) shi gongfen.

Zhangsan tall Lisi ten centimeter

'Zhangsan's height exceeds Lisi's by ten centimeters.'

b. Zhangsan gao Lisi *(shi gongfen).

Zhangsan tall Lisi ten centimeter

'Zhangsan's height exceeds Lisi's by ten centimeters.'

Fifth, in the X A-*guo1* Y (D) comparative, the adjective cannot be modified by a degree adverb, and the same obtains in the X A (Y) D comparative.

(49) a. *Zhangsan hen/geng gao-guo1 Lisi san gongfen.

Zhangsan very/even.more tall-guo1 Lisi three centimeter

b. *Zhangsan hen/geng gao Lisi san gongfen.

Zhangsan very/even.more tall Lisi three centimeter

Sixth, quantifiers (or plural NPs) are not allowed to serve as internal comparison items in the X A-*guo1* Y (D) comparative and the X A (Y) D comparative, unless in some specific context where all elements denoted by the quantifier (or the plural NP) share the same degree value, as (50) illustrates.

(50) a. *Zhangsan gao-guo1 qita/zhexie ren san gongfen.

Zhangsan tall-guo1 other/these person three centimeter

‘??Zhangsan is three centimeters taller than everyone else/these persons.’

b. *Zhangsan gao qita/zhexie ren san gongfen.

Zhangsan tall other/these person three centimeter

‘??Zhangsan is three centimeters taller than everyone else/these persons.’

Liu (2007) suggests that *–guo1* ‘exceed’ projects as *Guo1P*, in which the adjectival head, triggered by the affixal feature of *–guo1* ‘exceed’, overtly moves to the *guo* head (i.e. *–guo1*) position, as (51a) shows. With a full-fledged lexical meaning, *-guo1* ‘exceed’ requires that the referential NP serving as the target of comparison should be present. Besides, since *-guo1* ‘exceed’ functions as a predicate “strong” enough to restrict the interval argument of the adjective (cf. Schwarzchild and Wilkinson 2002), the measure phrase, which indirectly restricts the interval argument of the adjective, is optionally required.

(51) a. Zhangsan $[_{Guo1P}\ [_{Guo1'}\ [_{Guo1}\ gao_i\text{-}guo1]\ [_{AP}$ Lisi $[_{A'}\ [_{A}\ t_i]$ [san gongfen]]]]].

Zhangsan tall-guo1 Lisi three centimeter

‘Zhangsan is three centimeters taller than Lisi.’

b. ∃I∃K [gao’(Zhangsan, I) & gao’(Lisi, K) & san gongfen’ ([I－K])].

‘There is an interval I on the height scale such that Zhangsan is I-tall, there is another interval K such that Lisi is K-tall, and I differs from K by three centimeters.’

Based on the syntactic and semantic affinity between the X A-*guo1* Y (D)

comparative and the X A (Y) D comparative, Liu (2007) suggests that the X A (Y) D comparative such as (52) has a syntactic structure like (53a), in which the covert verbal suffix *–guo2* is derived from *-guo1* 'exceed' through grammaticalization. As (53a) indicates, the covert verbal suffix *–guo2* projects as *GuoP2*, in which *gao* 'tall', triggered by the affixal feature of *–guo2*, overtly moves to *–guo2*.

(52) Zhangsan gao Lisi san gongfen.

Zhangsan tall Lisi three centimeter

'Zhangsan's height exceeds Lisi's by three centimeters.'

(53) a. Zhangsan $[_{Guo2P}\ [_{Guo2'}\ [_{Guo2}\ gao_i\text{-}guo2]\ [_{AP}$ Lisi $[_{A'}\ [_{A}\ t_i]$ [san gongfen]]]]].

Zhangsan tall-guo2 Lisi three centimeter

'Zhangsan is three centimeters taller than Lisi.'

b. ∃I∃K [gao'(Zhangsan, I) & gao'(Lisi, K) & san gongfen' ([I—K])].

Grammaticalization bleaches the "semantic content" of *-guo2* (i.e. the *exceeding* meaning) to such an extent that *–guo2* places a less strict restriction on the selection of the adjective than *–guo1* 'exceed' does and cannot function as a predicate strong enough to restrict the interval argument of the adjective. Since the measure phrase is the only possible candidate to restrict the interval argument of the adjective, it is obligatorily required in the X A (Y) D comparative. Besides, the "semantic content" of *-guo2* is so bleached that the "transitivity" force of *–guo2* becomes weaker than that of *–guo1*. This makes the referential NP functioning as the target of comparison not necessary to be overtly realized in the X A (Y) D comparative.

Liu's (2007) analysis of the X A (Y) D comparative has two empirical and theoretical consequences. First, the relative order between the internal referential NP and the measure phrase can be regarded as a reflection of the more general

hierarchical relationship between the referential theme and the non-referential theme object.

Second, the agglutinated form deriving from the overt movement of the adjective to *–guo1* or *–guo2* is a variant form of the dynamic verb *exceed*. A degree adverb like *hen* 'very' or *geng* 'even more' cannot modify a dynamic verb; therefore, (54a-b) are ungrammatical.

(54) a. *Zhangsan hen/geng gao-guo1 Lisi san gongfen.
Zhangsan very/even.more tall- guo1 Lisi three centimeter
b. *Zhangsan hen/geng gao-guo2 Lisi san gongfen.
Zhangsan very/even.more tall-guo2 Lisi three centimeter

While Liu (2007) has provided a fairly complete analysis of the X A (Y) D comparative, there exists a problem that may weaken Liu's (2007) analysis. Under Liu's (2007) analysis, the incompatibility of the adjective in the X A (Y) D comparative with a degree adverb follows from the claim that a degree adverb cannot modify the dynamic verb composed of the adjective and *–guo2*. However, Liu's (2007) analysis does not capture the fact that the adjective in the X A (Y) D comparative is compatible with the degree adverb *showei* 'slightly', as shown in (55).

(55) Zhangsan shaowei gao-guo2 Lisi yi-dianer/yi-xie.
Zhangsan slightly tall-guo2 Lisi a-little/a-little
'Zhangsan is a little bit taller than Lisi.'

Chapter 4

Proposal

4.1 Introduction

This chapter is composed of the syntactic and semantic analyses of the X *shaowei* A Y *yi-dianer/yi-xie* comparative. In section 4.2, Bhatt and Pancheva's (2004) proposal that degree clauses can be merged late is first introduced as preliminaries. Then we propose that *shaowei* 'slightly' is merged countercyclically as the complement of the covert quantificational operator binding *yi-dianer/yi-xie* 'a little', which is treated as a variable, after the covert quantificational operator adjoins in a scope position. In section 4.3, we first introduce the semantics of gradable adjectives and comparatives as preliminaries. Then the obligatory occurrence of *yi-dianer/yi-xie* 'a little' and the optional occurrence of the referential NP functioning as the target of comparison in the X *shaowei* A Y *yi-dianer/yi-xie* comparative are accounted for.

4.2 The syntactic analysis of the X *shaowei* A Y *yi-dianer/yi-xie* comparative

Before proceeding to the syntactic issues regarding the X *shaowei* A Y *yi-dianer/yi-xie* comparative, we briefly introduce Bhatt and Pancheva's (2004) analysis of English comparatives as preliminaries.

4.2.1 Preliminary: Late merger of degree clauses

English comparatives manifest characteristics that cannot be easily accommodated in a single structure. Syntactically, the degree head *-er* cooccurs with the degree clause introduced by *than*, as shown in (56). In other words, there are selectional restrictions between *–er* and *than*. Since selectional restrictions are the hallmark of head-argument relationships, it is reasonable to conclude that the degree

clause is the syntactic argument of the degree head. Semantically, *-er* and the degree clause form a degree phrase that is interpreted as a degree quantifier argument of the matrix gradable predicate, as in (57b) (see Cresswell 1976, von Stechow 1984, Heim 1985, 2000). The degree quantifier [*-er* + degree clause] may be analyzed as moving to a scope position within the clause from where it binds the degree variable in argument position, as in (57c). In a nutshell, it is reasonable to posit that the degree head and the degree clause form a constituent to the exclusion of the gradable predicate.

(56) Simon drank *fewer* beers *than*/**as*/**that* Alex did.

(57) a. John is taller than 6 feet.

b. John is [$_{AP}$ [$_{DegP}$ –er than 6 feet] tall]

c. [$_{DegP}$ –er than 6 feet]$_1$ John is [$_{AP}$ [t_1 tall]

Despite the convincing syntactic and semantic evidence that the degree clause is the complement of *–er*, there is morphological evidence that *–er* forms a constituent with the gradable predicate to the exclusion of the degree clause. One reason for positing that *–er* and the gradable predicate form a constituent has been the existence of fully and partially suppletive forms, as in (58) and (59).

(58) a. [-er good] → better

b. [-er bad] → worse

(59) [-er tall] → taller

Moreover, not only are *–er* and the degree clause nonadjacent in the majority of cases, more often than not they may not even appear together as a constituent that excludes

the gradable predicate.

(60) *Ralf is [more than Flora is] tall.

cf. Ralf is taller than Flora is.

(61) *Ralf is [more than her] tall.

cf. Ralf is taller than her.

(62) *Ralf is [more than he is fit] tall.

cf. Ralf is more tall than he is fit.

(63) *Ralf is [more than fit] tall.

cf. Ralf is more tall than fit.

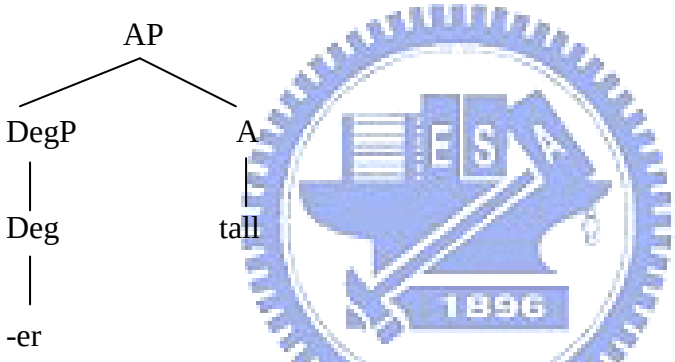
In order to reconcile the conflicting evidence regarding constituency in degree constructions, Bhatt and Pancheva (2004) propose that the degree head and the degree clause form a constituent not at the point where the degree head is merged, but after QR of the degree head and countercyclic merger of the degree clause. The selectional restrictions between *–er* and the degree clause obtain because the degree clause is merged as an argument to the QR-ed and right-adjoined *–er*. The lack of adjacency effects between the degree clause and the degree head follows from the fact that only the tail of the *–er*-chain is pronounced.

In its essentials, Bhatt and Pancheva's proposal follows Fox and Nissenbaum's (1999) analysis of relative clause extraposition. Developing Lebeaux's (1990) proposal that relative clauses can be merged countercyclically, Fox and Nissenbaum (1999) propose that relative clause extraposition involves countercyclic merger of the relative clause to an unpronounced copy of a QP that has undergone QR. Bhatt and Pancheva's (2004) analysis not only extends the idea of countercyclic merger to the domain of comparatives, it also shows that not only adjuncts but complements as well

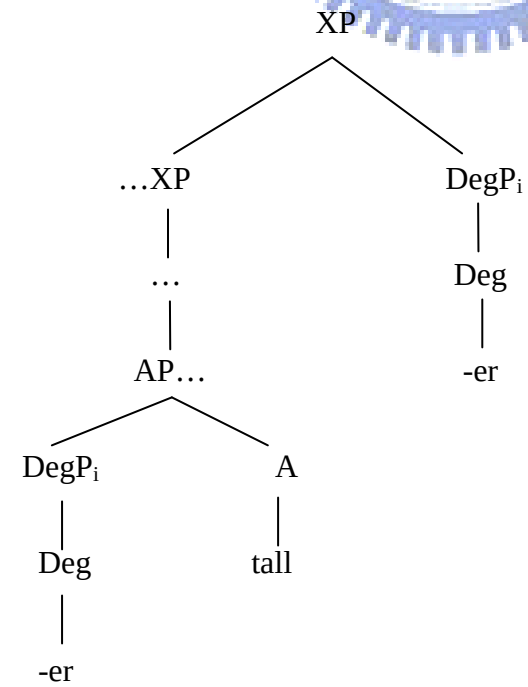
can be merged late (cf. Ishii 1997).

The architecture of English comparatives is illustrated in some more detail as follows. As shown in (64), *-er* is the head of a DegP which is the specifier of the gradable predicate. Being a quantificational expression, the DegP headed by *–er* undergoes QR to right-adjoin to a node of type ⟨ t ⟩ (indicated as XP in the trees in (65) and (66)), leaving behind a copy. The degree clause is then merged as an argument to the QR-ed *-er* (see (65) and (66) for an illustration). The degree head *–er* is interpreted in its scope position, but is pronounced in its base position (cf. Bobaljik 2002).

(64)



(65)



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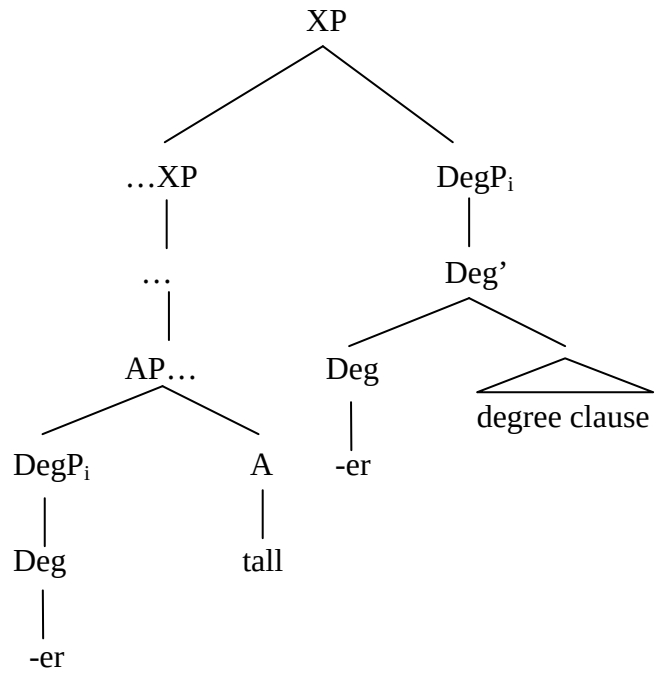


The interaction of extraposition with the scope of the comparison provides evidence that degree clauses are merged late, following QR of the degree head *–er*. Fox (2002: 19) has articulated the extraposition-scope correlation as in (67).

(67) *William's Generalization*

When an adjunct β is extraposed from a "source DP" α, the scope of α is at least as high as the attachment site of β (the extraposition site).

The contrast between (68) and (69) illustrates the generalization as articulated in (67), that is, it shows that the scope of the degree head is at least as high as the surface position of the degree clause.

(68) John read more books than Mary published in her life before you did.

a. Reading 1: *before > -er…d-many books*

i. John [$_{VP}$ read [[t_i many books] [-er [than Mary published in her life]]$_i$]]

[before you did [$_{VP}$ △]]

ii. John PAST [$_{VP}$ read [[t_i many books] [-er [than Mary published in her life]]$_i$]] [before you did [$_{VP}$ read [[t_i many books] [-er [than Mary published in her life]]$_i$]]]

John read more books than Mary published in her life before you read more books than Mary published in her life.

b. Reading 2: *-er…d-many books > before*

i. John [[$_{VP}$ read t_i] [before you did [$_{VP}$ △]]] [[t_j many books] [-er [than Mary published in her life]]$_j$]$_i$

ii. John [[$_{VP}$ read t_i] [before you did [$_{VP}$ read t_i]]] [[t_j many books] [-er [than Mary published in her life]]$_j$]$_i$

The number of books that John read before you read them exceeds the number of books that Mary published in her life.

c. *Reading 3: *-er > before > d-many books*, the Heim-Kennedy Constraint

(69) John read more books before you did than Mary published in her life.

a. *Reading 1: *before > -er…d-many books*

b. Reading 2: *-er…d-many books > before*

i. John [[$_{VP}$ read t_i] [before you did [$_{VP}$ △]]] [[t_j many books] [-er [than Mary published in her life]]$_j$]$_i$

ii. John [[$_{VP}$ read t_i] [before you did [$_{VP}$ read t_i]]] [[t_j many books] [-er [than Mary published in her life]]$_j$]$_i$

The number of books that John read before you read them exceeds the number of books that Mary published in her life.

c. *Reading 3: *-er > before > d-many books*, the Heim-Kennedy Constraint

(70) *The Heim-Kennedy Constraint*

If the scope of a quantificational DP contains the trace of a DegP, it also contains

that DegP itself. (Heim 2000: (27))

(68) and (69) contain the weak DP *more books than Mary published in her life*. In contrast to (68), (69) is unambiguous. In Bhatt and Pancheva's (2004) account of the contrast, in (68) the degree clause is merged low within the source DP that contains the degree head it is associated with. The whole DP can take scope either below or over the *before*-clause, as shown in (68a) and (68b). However, the degree clause in (69) is merged late at a position higher than the *before*-clause. By Bhatt and Pancheva's (2004) assumptions, this indicates that *–er* is in a position above *before*. Yet, given the Heim-Kennedy Constraint in (70), the *before*-clause cannot intervene between the degree quantifier (the degree head and the degree clause) and the degree predicate (*d-many books*). Therefore, the whole DP must have scope higher than the *before*-clause. Consequently, the reading available is the one given in (69b).

Bhatt and Pancheva (2004) further argue for a stronger version of the correlation between extraposition and scope than the one expressed in (67), at least as far as degree expressions are concerned.

(71) *The Extraposition-Scope Generalization (for degree expressions)*

When a degree clause β is extraposed from a degree head α, the scope of α is exactly as high as the merger site of β.

The following examples illustrate the generalization as articulated in (71), that is, they show that the scope of the degree head is exactly as high as the surface position of the degree clause.

(72) a. *Degree clause inside the embedded clause*

John is required [to publish fewer papers this year [than that number] in a major journal] [to get tenure].

Simplified LF structure: *required* > [*fewer* [*than n*]]

required [fewer [than *n*] λ*d* [PRO publish *d*-many papers]]

b. *Degree clause outside the matrix clause*

John is required [to publish fewer papers this year in a major journal] [to get tenure] [than that number].

Simplified LF structure: [*fewer* [*than n*]] > *required*

fewer [than *n*] λ*d* [required [PRO publish *d*-many papers]]

The availability of the *–er* > *required* reading in (72b) shows that the structure involving a degree abstraction that crosses *required* is semantically well formed. The absence of this reading in (72a) indicates that the scope of *-er* is marked exactly by the surface position of the degree clause; in other words, the degree quantifier in (72a) cannot move further.

In a word, the interaction of extraposition with the scope of comparison provides strong support for the proposal that degree clauses are overt indicators of the scope of the comparison and that they are merged late, after QR of the degree head.

4.2.2 Late merger of *shaowei* 'slightly'

4.2.2.1 Selectional restrictions despite nonadjacency

One of the clearest syntactic pieces of evidence that *shaowei* 'slightly' forms a constituent with *yi-dianer*/*yi-xie* 'a little' is the selectional restrictions between the two. As shown in (73), *yi-dianer*/*yi-xie* 'a little' cooccurs with *shaowei* 'slightly'.

(73) a. Wangwu shaowei gao Zhaoying yi-dianer.

Wangwu slightly tall Zhaoying a-little

'Wangwu is a little bit taller than Zhaoying.'

b. Wangwu shaowei pan Zhaoying yi-xie.

Wangwu slightly fat Zhaoying a-little

'Wangwu is a little bit taller than Zhaoying.'

c. *Wangwu hen/zui/geng/youdianer/bijiao gao Zhaoying

Wangwu very/the.most/even.more/a.bit/comparatively tall Zhaoying

yi-dianer.

a-little

d. *Wangwu hen/zui/geng/youdianer/bijiao pan Zhaoying

Wangwu very/the.most/even.more/a.bit/comparatively fat Zhaoying

yi-xie.

a-little

In other words, there are selectional restrictions between *yi-dianer*/*yi-xie* 'a little' and *shaowei* 'slightly'. Since selectional restrictions are the hallmark of head-argument relationships, it is reasonable to conclude that *shaowei* 'slightly' is the syntactic argument of *yi-dianer*/*yi-xie* 'a little'.

4.2.2.2 Obligatory nonadjacency between *shaowei* 'slightly' and *yi-dianer*/*yi-xie* 'a little'

One piece of evidence against the constituency of *yi-dianer*/*yi-xie* 'a little' and *shaowei* 'slightly' comes from the fact that it is not possible for the two to appear together, as the following examples illustrate.

(74) a. Wangwu shaowei gao Zhaoying yi-dianer.

Wangwu slightly tall Zhaoying a-little

'Wangwu is a little bit taller than Zhaoying.'

b. *Wangwu gao Zhaoying [yi-dianer shaowei].

Wangwu tall Zhaoying a-little slightly

(75) a. Wangwu shaowei pan Zhaoying yi-xie.

Wangwu slightly fat Zhaoying a-little

'Wangwu is a little bit fatter than Zhaoying.'

b. *Wangwu pan Zhaoying [yi-xie shaowei].

Wangwu fat Zhaoying a-little slightly

It appears that *yi-dianer*/*yi-xie* 'a little' and *shaowei* 'slightly' can never form a constituent at the position in which *yi-dianer*/*yi-xie* 'a little' is initially merged.

4.2.2.3 Late merger of *shaowei* 'slightly' resolves the conflict

The X *shaowei* A Y *yi-dianer/yi-xie* comparative exhibits properties that can not be easily accommodated in a single structure. In particular, there is convincing syntactic evidence that *shaowei* 'slightly' is the complement of *yi-dianer*/*yi-xie* 'a little'. However, there is also strong evidence that *shaowei* 'slightly' and *yi-dianer*/*yi-xie* 'a little' never appear together as a constituent.

Before we illustrate the architecture of the *shaowei* A Y *yi-dianer/yi-xie* comparative in some more detail, one point deserves particular clarification in connection with *yi-dianer*/*yi-xie* 'a little'. The measure phrase *yi-dianer*/*yi-xie* 'a little' is interpreted as a quantificational expression which measures part of the scale associated with the adjective (cf. Schwarzchild and Wilkinson 2002). Under fairly standard assumptions, quantificational expressions undergo QR; similarly, *yi-dianer*/*yi-xie* 'a little' may be analyzed as moving to a scope position. However,

there are arguments against QR in Mandarin Chinese. The first argument is Huang's (1982) isomorphism on the determination of scope relations between quantifiers.[4] Although the English sentence in (77) is ambiguous in allowing the two readings represented in (78a-b), its Chinese counterpart in (76) cannot be so construed. The subject QP must take scope over the object QP in example (76). In other words, S-structure positions seem to determine the quantifier scopes in Mandarin Chinese.

(76) Mei-ge-ren dou ai yi-ge-ren. (unambiguous)
every-CL-person all love one-CL-person
'For every *x*, there is a *y* such that *x* loves *y*.'

(77) Everyone loves someone. (ambiguous)

(78) a. [$_{IP}$ everyone$_i$ [$_{IP}$ someone$_j$ [$_{IP}$ x_i loves y_j]]]
'For every *x*, there is a *y*, such that *x* loves *y*.'

b. [$_{IP}$ someone$_j$ [$_{IP}$ everyone$_i$ [$_{IP}$ x_i loves y_j]]]
'There is a *y* such that, for every *x*, *x* loves *y*.'

A second argument against QR in Mandarin Chinese concerns the fact that quantificational phrases may take the wide-scope reading but manifest no island effects in various island constructions such as the complex NP in (79).

(79) Wo nian-le [$_{NP}$ [$_{CP}$ mei-ge-jiaoshou tuijian e$_i$] de shu$_i$]. (Yang 2002:14)
I read-Asp every-CL-professor recommend DE book

[4] The Chinese sentence in (76), contrary to its English counterpart in (77), is unambiguous. Huang (1982) accounts for such a contrast by postulating the existence of an Isomorphic Principle and assuming a difference in the restructuring possibilities between English and Chinese:
(i) *The Isomorphic Principle*
Suppose A and B are QPs. Then if A c-commands B at S-structure, A c-commands B at LF.
Restructuring nullifies the effect of the Isomorphic Principle in English but is prohibited by the phrase structure rules in Chinese. Therefore, English does not exhibit the effect of the Isomorphic Principle while Chinese does.

'For every professor *x*, there is a book *y* recommended by *x*, such that I have read *y*.' (wide-scope reading)

To account for the lack of scope ambiguity and island effects, quantificational phrases in Mandarin Chinese should be treated as variables which stay in-situ and whose scope marking and interpretation are determined by quantificational operators introduced by Merger at the sentential level following Tsai's (1999) Lexical Courtesy Hypothesis (LCH).[5] Therefore, instead of undergoing QR, the quantificational expression *yi-dianer*/*yi-xie* 'a little' is treated as a variable which is bound by a covert quantificational operator whose position marks the exact scope of *yi-dianer*/*yi-xie* 'a little'.

Turning now to the architecture of the *shaowei* A Y *yi-dianer/yi-xie* comparative, we propose that the conflicting evidence concerning the constituency of *yi-dianer*/*yi-xie* 'a little' and *shaowei* 'slightly' can be reconciled by positing that *shaowei* 'slightly' is merged late. Specifically, we propose that *shaowei* 'slightly' is merged countercyclically as the complement of the covert quantificational operator binding *yi-dianer/yi-xie* 'a little', which is treated as a variable, after the covert quantificational operator adjoins in a scope position. The selectional restrictions between *yi-dianer*/*yi-xie* 'a little' and *shaowei* 'slightly' obtain because *shaowei* 'slightly' is merged as an argument to the covert quantificational operator binding *yi-dianer*/*yi-xie* 'a little', which is treated as a variable. This approach allows us to derive the fact that there is a correlation between the surface position of the degree adverb *shaowei* 'slightly' and the semantic scope of the measure phrase

[5] Tsai (1999) proposes a minimalist account with his Lexical Courtesy Hypothesis (LCH) in (i) to deal with the *wh*-dependency conditions in terms of Economy.
(i) Lexical Courtesy Hypothese (LCH)
If a language may introduce an operator by Merger, it will not resort to Chain formation.

yi-dianer/*yi-xie* ‘a little’. The lack of adjacency effects between *shaowei* ‘slightly’ and *yi-dianer*/*yi-xie* ‘a little’ follows from the fact that *yi-dianer*/*yi-xie* ‘a little’ is pronounced in situ.

In its essentials, this proposal follows Bhatt and Pancheva’s (2004) analysis that the degree clause is merged countercyclically, after *–er* moves covertly to its scope position, and Liu’s (2007) analysis that the X A (Y) D comparative contains the weak covert verbal suffix *–guo2*.

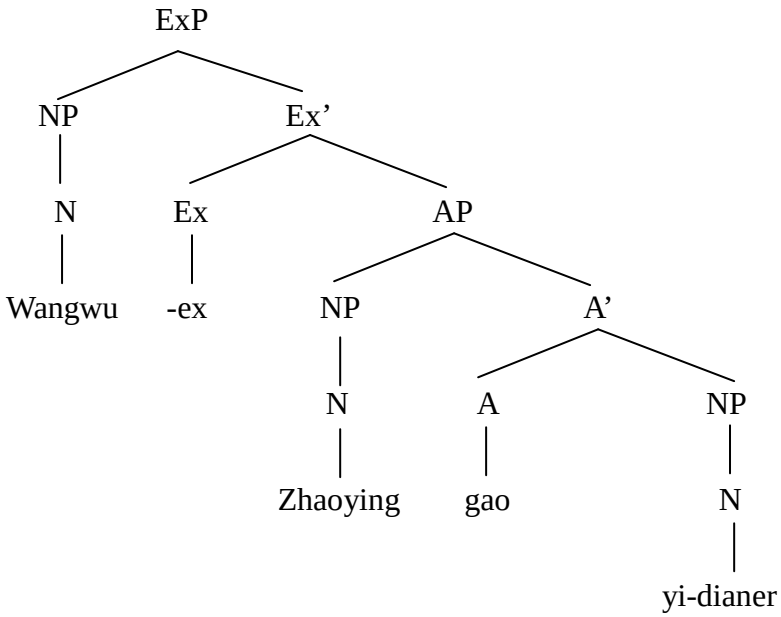
The architecture of the X *shaowei* A Y *yi-dianer/yi-xie* comparative is illustrated in some more detail as follows. The adjective *gao* ‘tall’ in (80) is merged with its NP complement *yi-dianer* ‘a little’ to form the A-bar *gao yi-dianer* ‘tall a-little’, and this A-bar in turn merges with the NP *Zhaoying* ‘Zhaoying’ to form the AP structure *Zhaoying gao yi-dianer* ‘Zhaoying tall a-little’. This AP then merges as the complement of the covert *exceeding* verbal suffix (i.e. *-ex*) to form the Ex-bar. The resulting Ex-bar structure is then merged with the subject *Wangwu* ‘Wangwu’ to form the ExP, as shown in (81).

(80) Wangwu shaowei gao Zhaoying yi-dianer.

Wangwu slightly tall Zhaoying a-little

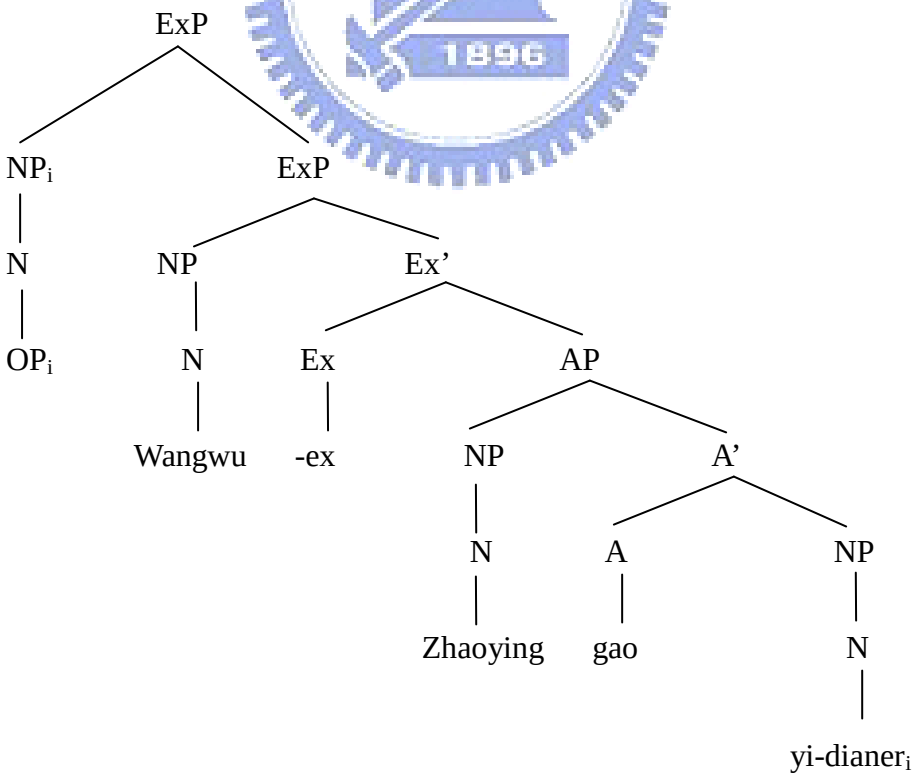
‘Wangwu is a little bit taller than Zhaoying.’

(81)



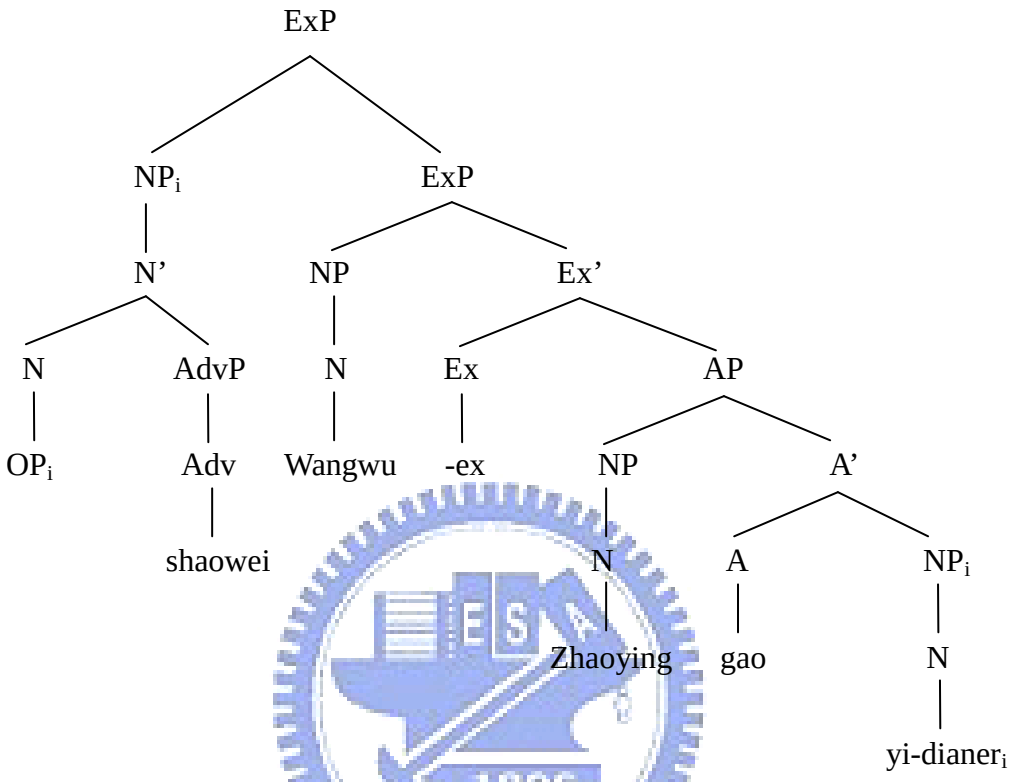
The measure phrase *yi-dianer* 'a little' is then treated as a variable bound by a covert quantificational operator. The covert quantificational operator is assumed to adjoin in a scope position, that is, it adjoins to ExP, as shown in (82).

(82)



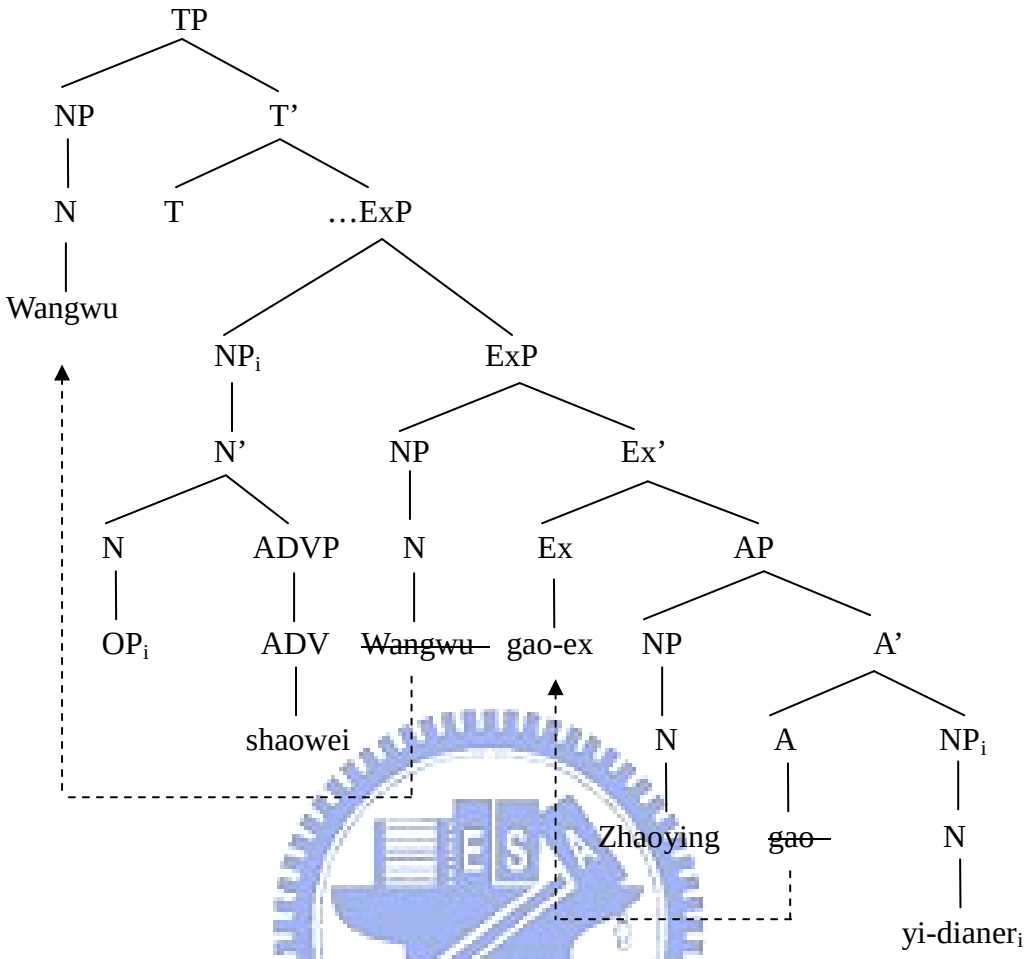
The degree adverb *shaowei* ‘slightly’ is then merged as the complement of the covert quantificational operator, as in (83).

(83)



The ExP is then merged with the T to form the T-bar. The adjective *gao* ‘tall’ originates as the head A of AP, and then raises up to adjoin to the covert verbal suffix *–ex* heading ExP due to the affixal feature of *–ex*; the subject *Wangwu* ‘Wangwu’ in turn originates in spec-ExP, and subsequently the [EPP] and φ-features of the T trigger raising of the subject into [Spec, TP], deriving the structure (84) below (where the dotted arrows show movements which have taken place in the course of the derivation). The analysis in (84) correctly specifies the word order in (80) *Wangwu shaowei gao Zhaoying yi-dianer* ‘Wangwu is a little bit taller than Zhaoying’.

(84)

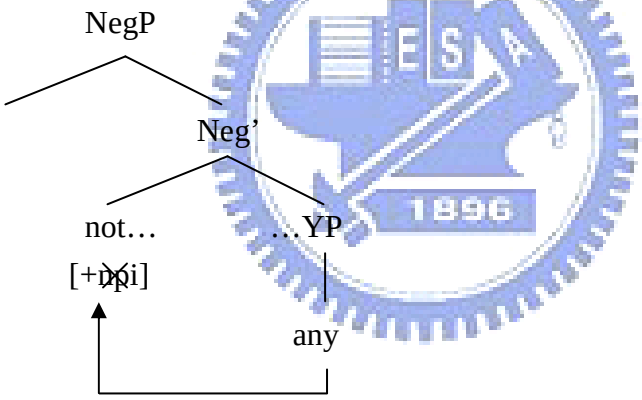


In this section, the basics of the proposal regarding the architecture of the X *shaowei* A Y *yi-dianer/yi-xie* comparative have been illustrated at length. The two crucial aspects of the proposal—countercyclic merger and adjunction of a covert quantificational operator—are operations that have been independently proposed and are well justified. The contribution of this proposal is to relate these two ideas in a way that resolves the contradictory evidence with respect to the structure of the X *shaowei* A Y *yi-dianer/yi-xie* comparative and directly relates the surface position of the degree adverb *shaowei* 'slightly' with the scope of the measure phrase *yi-dianer/yi-xie* 'a little'. The following two sections are devoted to presenting detailed evidence in support of the proposal for late merger of *shaowei* 'slightly' in the X *shaowei* A Y *yi-dianer/yi-xie* comparative.

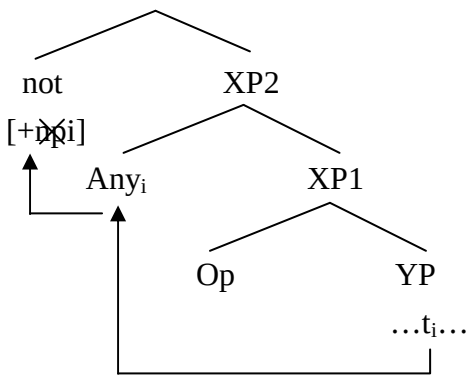
4.2.2.4 Evidence related to intervention effects on NPIs

Guerzoni (2006) proposes that Negative Polarity Items (NPIs) are particular instances of indefinites, in that they carry a 'weak'/uninterpretable feature ([+npi]) that needs to be checked at LF against a negative or Downward Entailing (DE) head. The licensing of the [+npi] feature can be achieved in one of two ways: (i) by feature movement (as in (85a)), when no blocking elements such as quantificational or negative operators intervene, or (ii) by phrasal movement to a position suitable for checking (as in (85b)).

(85) a. Feature movement



b. Phrasal movement + feature movement



Linebarger's (1987) examples given in (86) help illustrate that phrasal

movement is obligatory when feature movement is blocked by a universal quantifier. This is why the surface scope relation in (86b) is ruled out and the only available reading is the one in which the NPI undergoes QR to a position higher than the universal quantifier (i.e. (86c)).

(86) a. Mary doesn't wear any earring at every party.

b. *LF: NOT $\forall$ x $\exists$ y [party (x) & earring (y) $\rightarrow$ wears (M, y at x)]

c. LF: NOT $\exists$ y [earring (y) & $\forall$ x [party (x) $\rightarrow$ wears (M, y at x)]]

On the other hand, NPIs licensed in contexts where phrasal movement is ungrammatical are expected to be sensitive to intervention effects, since intervention effects are a characteristic property of feature movement. A case in point is provided by existential *there*-sentences. It is well-known that the "associate" constituent in these structures cannot undergo phrasal movement.[6] Given this, NPIs in the associate position of a *there*-sentence cannot be licensed by phrasal movement and therefore are expected to be sensitive to the blocking effect of intervening quantifier. (87) confirms this prediction.

(87) a. I didn't tell Mary that there was any food in the fridge.

b. *I didn't tell everybody that there was any food in the fridge.

We will now demonstrate that intervention effects on NPIs occur in the X

[6] Scopal properties of the associate in *there*-sentences containing a modal operator illustrate the point: the indefinite associate can receive only a narrow scope interpretation.
(i) a. John must be meeting some student at the department. (Ambiguous: must > $\exists$, $\exists$ > must)
b. There must be some student in the department. (Unambiguous: must > $\exists$, * $\exists$ > must)
As inverse scope is the result of QR, the facts in (i) confirm that the associate is frozen in its surface position.

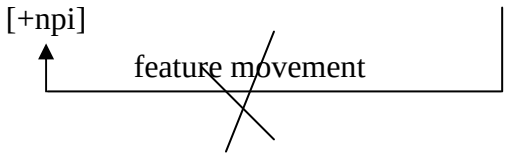
shaowei A Y *yi-dianer/yi-xie* comparative too. Intervention effects on NPIs existing in the X *shaowei* A Y *yi-dianer/yi-xie* comparative receives a natural explanation if the covert quantificational operator binding *yi-dianer/yi-xie* 'a little', which is treated as a variable, is allowed to adjoin in a scope position, followed by late merger of *shaowei* 'slightly' with the covert quantificational operator. Therefore, intervention effects on NPIs existing in the X *shaowei* A Y *yi-dianer/yi-xie* comparative can be taken as evidence for the proposal that *shaowei* 'slightly' can be merged late.

Consider the example in (88a), where the NPI *renhe-ren* 'anyone' is involved. Given the impossibility of QRing the quantifier *renhe-ren* 'anyone', the checking requirements of *renhe-ren* 'anyone' cannot be satisfied via phrasal movement. Although feature movement becomes compulsory, it is blocked by the covert quantificational operator binding *yi-dianer* 'a little', which is treated as a variable, as the simplified skeletal structure of (88a) shown in (88b) illustrates. Therefore, the ungrammaticality of (88a) is directly predicted by our proposal.

(88) a. *Wangwu meiyou shaowei gao renheren yi-dianer.

Wangwu not slightly tall anyone a-little

b. *[$_{TP}$ Wangwu meiyou [$_{ExP}$ OP$_i$ shaowei gao-ex renhe-ren yi-dianer$_i$]].



In a nutshell, intervention effects on NPIs existing in the X *shaowei* A Y *yi-dianer/yi-xie* comparative provides strong support for the proposal that *shaowei* 'slightly' is merged countercyclically as the complement of the covert quantificational operator binding *yi-dianer/yi-xie* 'a little', which is treated as a variable, after the covert quantificational operator adjoins in a scope position.

4.2.2.5 Evidence related to intervention effects on A-not-A operators

Yang (2008) points out that in Mandarin Chinese *wh*-adverbs and A-not-A operators are subject to what he terms the weak intervention effect while *wh*-nominals are not.[7]

(89) a. Ta weishemo cizhi?

he why resign

'Why did he resign?'

b. *{Suoyouderen/Mei-ge-ren} dou weishemo cizhi?

all.person/every-CL-person all why^{adv} resign

'Why did all people/everyone resign?'

c. *{Meiyouren/Henshaoren/Zuiduo liang-ge ren} weishemo cizhi?

nobody/few.person/at.most two-CL person why^{adv} resign

'Why did nobody/few people/at most two people resign?'

(90) a. Ta zenmo dun niurou?

he how^{adv} stew beef

'How did he stew beef?'

b. *{Suoyouderen/Mei-ge-ren} dou zenmo dun niurou?

all.person/every-CL-person all how^{adv} stew beef

'How did all people/everyone stew beef?'

c. *{Meiyouren/Henshaoren/Zuiduo liang-ge ren} zenmo dun niurou?

nobody/few.person/at.most two-CL person how^{adv} stew beef

[7] Yang (2008) points out that there are at least two types of intervention effects in Mandarin Chinese. One is called the "weak intervention effect" where only the *wh*-adverbs and A-not-A operators are ruled out whereas the *wh*-nominals are fine. The other type is called the "strong intervention effect" where all the *wh*-elements are ruled out.

'How did nobody/few people/at most two people stew beef?'

(91) a. Zhangsan qu-bu-qu Taibei?

Zhangsan go-not-go Taipei

'Will Zhangsan go to Taipei or not?'

b. *{Suoyouderen/Mei-ge-ren} dou qu-bu-qu Taibei?

all.person/every-CL-person all go-not-go Taipei

'Will all people/everyone go to Taipei or not?'

c. *{Meiyouren/Henshaoren} qu-bu-qu Taibei?

nobody/few.person go-not-go Taipei

'Will nobody/few people go to Taipei or not?'

(92) a. {Suoyouderen/Mei-ge-ren} dou chi shemo?

all.person/every-CL-person all eat what

'What did all people/everyone eat ___?'

b. {Meiyouren/Henshaoren/Zuiduo liang-ge ren} gan gen shei dajia? (Soh 2005)

nobody/few.person/at.most two-CL person dare with who fight

'Who is the person x such that nobody/few people/at most two people dare(s) to fight with x?'

The weak intervention effect is reminiscent of the LF-movement property of *wh*-adverbs and A-not-A operators. Huang (1982) shows that Chinese *wh*-adverbs are subject to island effects.

(93) a. *Ta xihuan [$_{CP}$ [$_{DP}$ Zhangsan weishemo xie] de shu]?

he like Zhangsan why^{adv} write DE book

'Why does he like the book(s) that Zhangsan writes *t*?'

b. *Ta xihuan [$_{CP}$ [$_{DP}$ Zhangsan zenmo dun] de niurou]?

he like Zhangsan how[adv] stew DE beef

'How does he like the beef that Zhangsan stew *t*?'

On the other hand, Chinese wh-nominals are not subject to island effects because they do not undergo any LF-movement at all (see Tsai 1994).[8]

(94) Ta xihuan [$_{CP}$ [$_{DP}$ shei xie] de shu]?

he like who write DE book

'Who does he like the book(s) that wrote?'

Huang (1982) also shows that the A-not-A question exhibits island effects. He suggests that the A-not-A question involves an LF-moving operator which is subject to island constraints.

(95) * Ta xihuan [$_{CP}$ [$_{DP}$ Zhangsan xie-bu-xie] de shu]?

he like Zhangsan write-not-write DE book

'Does he like the book(s) that Zhangsan writes or not?'

Since only the LF-moving *wh*-adverbs and A-not-A operators exhibit intervention effects, it is reasonable to conclude that the weak intervention effect is an outcome of LF-movement.

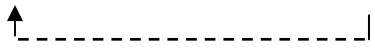
Yang (2008) argues that the factor which triggers the weak intervention effect is a constraint on locality or minimality with respect to feature movement as illustrated in (96), termed as Minimality Effect. Under the minimalist term, the intervention

[8] Tsai (1994) suggests the nominal in-situ *wh*-construal in Chinese is substantiated through the operator-variable pair in an unselective binding fashion; therefore, no movement should be involved.

effect occurs when feature movement of an interpretable [iF_1] of Y is blocked by an intervening Z bearing the same feature [iF_1].

(96) Minimality Effect

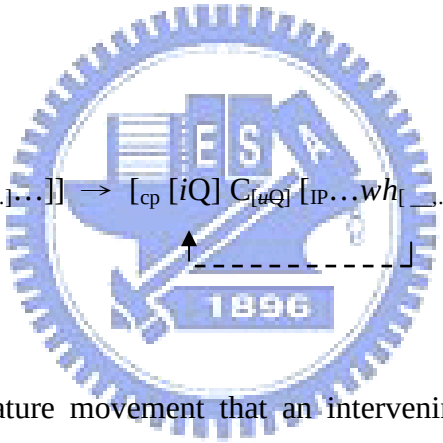
*[[iF_1] $X_{[\text{~~}uF_1\text{~~}]}$ …[$Z_{[iF_1]}$… [… $Y_{[\_,\ iF_2,\ iF_3]}$ …]]]



The LF-moving *wh*-adverbs are subject to feature movement where their Q-feature (or *wh*-feature) is probed by C and thus undergoes feature movement to C in order to check the uninterpretable feature [*u*Q].

(97) Chinese *wh*-adverbs

[$_{CP}$ $C_{[uQ]}$ [$_{IP}$…$wh_{[iQ,\ldots]}$…]] → [$_{cp}$ [*i*Q] $C_{[\text{~~}uQ\text{~~}]}$ [$_{IP}$…$wh_{[\ \_,\ldots]}$…]]



It is then during the feature movement that an intervening scope-bearing element bearing a feature of the same type, i.e., operator feature [Op], blocks the feature movement, hence the intervention effect.

(98) *[$_{CP}$ [*i*Q] $C_{[\text{~~}uQ\text{~~}]}$ [$_{IP}$ **Scope-bearing Element**$_{[Op]}$ ... ‘why/how/A-not-A’$_{[\ \_,\ \ldots]}$ ...]]

We will now demonstrate that the intervention effect on the A-not-A operator occurs in the X *shaowei* A Y *yi-dianer/yi-xie* comparative too. The intervention effect on the A-not-A operator existing in the X *shaowei* A Y *yi-dianer/yi-xie* comparative receives a natural explanation if the covert quantificational operator binding

yi-dianer/yi-xie ‘a little’, which is treated as a variable, is allowed to adjoin in a scope position, followed by late merger of *shaowei* ‘slightly’ with the covert quantificational operator. Therefore, the intervention effect on the A-not-A operator existing in the X *shaowei* A Y *yi-dianer/yi-xie* comparative can be taken as evidence for the proposal that *shaowei* ‘slightly’ can be merged late.

Consider the example in (99a), in which the A-not-A constituent *gao-bu-gao* ‘tall-not-tall’ is involved. The LF-moving A-not-A constituent *gao-bu-gao* ‘tall-not-tall’ is subject to feature movement where its Q-feature is probed by C and thus undergoes feature movement to C in order to check the uninterpretable feature [*u*Q]. It is then during the feature movement that the covert quantificational operator binding *yi-xie* ‘a little’, which is treated as a variable, blocks the feature movement, as the simplified skeletal structure of (99a) shown in (99b) illustrates. Therefore, the ungrammaticality of (99a) is directly predicted by our proposal.

(99) a. *Wangwu shaowei gao-bu-gao Zhaoying yi-xie?

Wangwu slightly tall-not-tall Zhaoying a-little

b. *[$_{CP}$ [*i*Q] C$_{[u\text{Q}]}$ [$_{TP}$ Wangwu **OP$_i$** shaowei gao-bu-gao$_{[\ _,\ \ldots]}$ Zhaoying yi-xie$_i$]]?

In a word, the intervention effect on the A-not-A operator exisitng in the X *shaowei* A Y *yi-dianer/yi-xie* comparative provides strong support for the proposal that *shaowei* ‘slightly’ is merged countercyclically as the complement of the covert quantificational operator binding *yi-dianer/yi-xie* ‘a little’, which is treated as a variable, after the covert quantificational operator adjoins in a scope position.

4.2.2.6 The optional occurrence of *shaowei* ‘slightly’

Bhatt and Pancheva (2004) conclude that the degree clause is the syntactic argument of the degree head in English comparatives since there are selectional restrictions between *–er* and *than*. However, the occurrence of the degree clause is optionally required, as shown in (100) below. Likewise, in the X *shaowei* A Y *yi-dianer/yi-xie* comparative the degree adverb *shaowei* 'slightly' is the syntactic argument of the covert quantificational operator binding the measure phrase *yi-dianer/yi-xie* 'a little', which is treated as a variable, since there are selectional restrictions between *yi-dianer/yi-xie* 'a little' and *shaowei* 'slightly'. However, the degree adverb *shaowei* 'slightly' is allowed to be omitted, as the examples in (101-102) illustrate.

(100) a. John is happier than Bill.

b. John is happier.

(101) a. Wangwu shaowei gao Zhaoying yi-dianer.

Wangwu slightly tall Zhaoying a-little

'Wangwu is a little bit taller than Zhaoying.'

b. Wangwu gao Zhaoying yi-dianer.

Wangwu tall Zhaoying a-little

'Wangwu is a little bit taller than Zhaoying.'

(102) a. Wangwu shaowei pan Zhaoying yi-xie.

Wangwu slightly fat Zhaoying a-little

'Wangwu is a little bit fatter than Zhaoying.'

b. Wangwu pan Zhaoying yi-xie.

Wangwu fat Zhaoying a-little

'Wangwu is a little bit fatter than Zhaoying.'

4.2.2.7 Summary

We have presented an approach to the analysis of the X *shaowei* A Y *yi-dianer/yi-xie* comparative construction that allows us to simultaneously capture two generalizations which seem to pull in opposite directions. One is that there are selectional restrictions between *yi-dianer/yi-xie* 'a little' and *shaowei* 'slightly', and the other is that *yi-dianer/yi-xie* 'a little' and *shaowei* 'slightly' cannot surface as sisters. The proposal receives strong support from the evidence related to intervention effects on NPIs and A-not-A operators. Furthermore, we explain the optional occurrence of *shaowei* 'slightly' in the X *shaowei* A Y *yi-dianer/yi-xie* comparative by analogy with that of the degree clause in English comparatives.

4.3 The semantic analysis of the X *shaowei* A Y *yi-dianer/yi-xie* comparative

Before proceeding to the semantic issues regarding the X *shaowei* A Y *yi-dianer/yi-xie* comparative, we briefly introduce the semantics of gradable adjectives and comparatives as preliminaries.

4.3.1 Preliminary: The semantics of adjectives and comparatives

In section 4.3.1.1, we state the semantics of adjectives. Then, we present Schwarzchild and Wilkinson's (2002) interval-based analysis of comparatives in section 4.3.1.2.

4.3.1.1 The semantics of adjectives

Gradable adjectives are traditionally assumed to denote two-place relations connecting individuals with degrees (see Seuren 1973, Cresswell 1976, von Stechow 1984, Heim 1985, Bierwisch 1989, Klein 1991, Kennedy and McNally 2005a, b). To put it more precisely, a gradable adjective like *expensive* has the denotation in (103),

where **expensive** represents a measure function that takes an entity and returns its cost, a degree on the scale associated with the adjective.

(103) [[expensive]] = λ*d*λ*x*. **expensive**(*x*) = *d*

The adjective *expensive* thus denotes a relation between degrees of cost *d* and objects *x* such that the cost of *x* equals *d*.

Under such an approach, degree morphology — in English, comparative morphemes, degree modifiers, measure phrases, and the phonologically null positive degree morpheme *pos* — that saturates and imposes restrictions on the degree argument determines the value of the degree argument (see Kennedy and McNally 2005b).[9]

In the following two subsections, we briefly introduce Kennedy and McNally's (2005a) analysis of degree modifiers and Schwarzchild's (2004) analysis of measure phrases to explain how degree modifiers and measure phrases restrict the degree argument of the adjectival predicate.

4.3.1.1.1 Degree adverbs

According to Kennedy and McNally (2005a), degree morphemes whose role is to saturate the degree argument of the adjective denote functions from (gradable) adjective meanings to properties of individuals, that is, they are of type <<d, <e, t>>, <e, t>>. The template in (104), where **R** is some restriction on the degree argument of

[9] Following von Stechow (1984), Kennedy and McNally (2005a: 350) assume that unmodified APs contain a null degree morpheme *pos* encoding the relation **standard**, which holds of a degree *d* just in case it meets a standard of comparison for an adjective *G* with respect to a comparison class determined by **C**, a variable over properties of individuals whose value is determined contextually, as shown in (i). Furthermore, the requirements imposed by the **standard** relation, as Kennedy and McNally (2005a: 350) argue, must vary depending on the lexical features of the adjective.
(i) [[*pos*]] = λ*G*λ*x*. ∃ *d*[**standard**(*d*)(*G*)(**C**) ∧ *G*(*d*)(x)]

the adjective, is the characterization of the meanings of degree morphemes.

(104) [[Deg(P)]] = $\lambda G \lambda x. \exists d[\mathbf{R}(d) \wedge G(d)(x)]$

It is the value of **R** that distinguishes different degree morphemes from each other. Kennedy and McNally (2005a) argue that the distribution and interpretation of degree modifiers are sensitive to the scale structure (open versus closed) and standard value (relative versus absolute) of the expressions they modify. To put it more precisely, proportional degree modifiers are acceptable with closed-scale (or absolute) adjectives while non-proportional ones with open-scale (or relative) adjectives. For example, the proportional modifier *half* has a denotation along the lines of (105a), where S_G represents the scale associated with a gradable adjective *G* and **diff** is a function that returns the difference between two degrees, so that the modifier *half* is compatible only with adjectives that map their arguments onto scales with maximal and minimal elements. The example in (105b), where the adjectival predicate *half visible* has a denotation like (105c), in which the degree argument of the closed-scale adjective *visible* is saturated and restricted by the proportional degree adverb *half*, is therefore grammatical.

(105) a. [[half]] = $\lambda G \lambda x. \exists d[\mathbf{diff}(\mathbf{max}(S_G))(d) = \mathbf{diff}(\mathrm{d})(\mathbf{min}(S_G)) \wedge G(d)(x)]$

b. The figure was half visible.

c. [[half]]([[visible]])

= $\lambda x. \exists d[\mathbf{diff}(\mathbf{max}(S_v))(d) = \mathbf{diff}(\mathrm{d})(\mathbf{min}(S_v)) \wedge \mathbf{visible}(x) = d]$

For non-proportional degree modifiers, let us consider *very* as an example. According to Klein (1980), a predicate of the form *very A* is analyzed in essentially

the same way as its simple, unmodified counterpart, with one important difference: whereas the regular contextual standard is a degree that exceeds a norm or average of the relevant property calculated on the basis of an arbitrary, contextually determined comparison class, the *very* standard is a norm or average calculated in the same way but just on the basis of those objects to which the unmodified predicate truthfully applies (see von Stechow 1984, and Kennedy and McNally 2005a). For example, in a context in which the standard of comparison for the adjective (phrase) *tall* is the average degree of height for the comparison class *basketball players*, the standard of comparison for the AP *very tall* is an average of height for just the tall basketball players.

Kennedy and McNally (2005a) implement Klein's (1980) analysis by analyzing *very* in terms of the **standard** relation which requires the degree argument of an adjective *G* to exceed a norm for a comparison class that has the property *G* in the context of utterance, as made explicit in (106), which specifies the denotation of *very* relative to a context *c*.

(106) $[[\text{very}]]^c = \lambda G \lambda x.\, \exists d[\textbf{standard}(d)(G)(\lambda y.[[pos(G)(y)]]^c) \wedge G(d)(x)]$

The reason for the restriction of *very* to relative adjectives is that modification by *very* has the effect of raising the standard for relative adjectives while it has absolutely no semantic effect for absolute adjectives whose standard is always fixed to the appropriate endpoint of the scale regardless of comparison class. The example in (107a), where the adjectival predicate *very expensive* has a denotation like (107b), in which the degree argument of the open-scale adjective *expensive* is saturated and restricted by the non-proportional degree adverb *very*, is therefore grammatical.

(107) a. The coffee at the airport is very expensive.

b. $[[very]]^c([[expensive]])$

$= \lambda x.\, \exists\, d[\textbf{standard}(d)(expensive)(\lambda y.[[pos(expensive)(y)]]^c) \wedge$

$expensive(d)(x)]$

4.3.1.1.2 Measure phrases

If Bill's height exceeds John's then there is a gap that spans from John's height up to Bill's. A measure phrase can be used to tell us what the size of that gap is. If Bill is 3 inches taller than John, then it is a three-inch gap. This fact can be expressed with the formula in (108b).[10]

(108) a. Bill is [3 inches] taller than John.

b. $\exists\, h_b \exists\, h_j\ h_b = \text{UpLim}(\{d:\ tall'(b,\ d)\}) \wedge h_j = \text{UpLim}(\{d:\ tall'(j,\ d)\}) \wedge$

3-inches'([UpLim({d: tall'(j, d)}), UpLim({d: tall'(b, d)})])

A measure phrase is a predicate of a set of degrees, in the case of the comparative this set is just the gap between the two degrees quantified over by the comparative.

Measure phrases can appear with non-compared adjectives: *5 feet tall*.[11] Like event modifiers in extended NPs and in VPs, the measure phrase predicates of a degree argument of the adjective. But given the kind of meaning a measure phrase

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[10] There are at least two ways to understand tall'(x, d) corresponding to the two glosses in (i), the latter following a suggestion in Kamp (1975).
(i) a. tall'(x, d) "x's height is exactly d"
b. tall'(x, d) "x's height exceeds d"
Given the exceeds reading adopted by Schwarzschild (2004), for any x, **tall'**(x, d) is satisfied by many degrees: all those that lie below x's height. It is the upper limit for this set that is relevant to the comparative. So a formula as in (108b) is needed.

[11] Liu (2007: 69-71) points out that, like English, the ability of an adjective in Mandarin Chinese to combine directly with a measure phrase for forming a "measure phrase adjective" pattern turns out to be lexically idiosyncratic because only adjectives like *gao* 'tall/high', *kuan* 'wide', *shen* 'deep', *hou* 'thick', *da* 'old', *chang* 'long', and *zhong* 'heavy' form such patterns.

must have to do its job in comparatives, it is not of the right type to directly predicate of a degree argument of an adjective. Schwarzchild (2004) proposes a lexically governed type-shift which applies to some adjectives allowing them to combine with a measure phrase. Specifically, Schwarzchild (2004) proposes that some adjectives must undergo a lexical rule that produces homonyms and these homonyms must have interval arguments (sets of degrees) in place of degree arguments. Such a rule is given in (109).

(109) Homonym Rule: from degrees to intervals

If A has meaning A' (i.e. A_1') that relates individuals to degrees, then A has a secondary meaning (i.e. A_2') relating individuals to sets of degrees (intervals).

The secondary meaning is given by: $\lambda I.\lambda x.\ I = \{d: A'(x, d)\}$

Homonym Rule applies to *tall, wide, deep, thick, old, long, high*.

Given the Homonym Rule, example (110a) has a semantic structure in (110b), which is equivalent to (110c).

(110) a. John is [5 feet] tall.

b. $\exists I\ [tall_2'(j, I) \wedge 5\ feet'(I)]$

c. $5\ feet'(\{d: tall_1'(x, d)\})$

4.3.1.2 The semantics of comparatives

Gradable adjectives are used to order individuals in their domain. To say that John is more noisy than Mary is to order him above her with respect to noisiness. Cold presupposes a temperature ordering, tall a height ordering, and so on. Generalizing on this ordering of individuals we arrive at the notion of a scale with a

set of points representing the possible positions in the ordering that an individual might occupy. In many cases we invent names for these points: inches, dollar amounts, decibels, degrees centigrade, and so on. These points are the basis for comparison according to degree analyses of the comparative (see Creswell 1976, and von Stechow 1984). A simple version of this view says that if Bill is taller than Tom, then there is a point on the height scale corresponding to Bill, and it is above the point corresponding to Tom. Similarly, if the point on the expense scale corresponding to the dress is above the one for the shirt, then the dress is more expensive than the shirt. While this seems to be an intuitively satisfying story, comparatives containing quantifiers present the challenge to degree-based (or point-based) analyses of the comparative. As Schwarzchild and Wilkinson (2002: 8-11) points out in relation to example (111), degree analyses of the comparative misses the simple observation that "[i]n deciding whether Q is taller than everybody else is, we don't look for a point corresponding to everyone else, but rather we scan the scale to check everyone's height".

(111) Q is taller than everybody else is (t tall).

6'→	
5'9"→	
5'8"→	H
5'7"→	J, K, L, M, N
5'6"→	
5'5"→	Q
5'4"→	R, S
5'3"→	T, U, V

Due to the challenge presented by comparatives containing quantifiers to degree analyses, Schwarzchild and Wilkinson (2002) present a new analysis of comparatives based on intervals rather than points on a scale. Example (112) is true if there is a

one-inch interval on a height scale between an interval containing John's height and an interval containing Mary's height. Since differentials measure gaps between intervals, Schwarzchild and Wilkinson (2002) define a subtraction operation as in (113) below: assuming I is above K, [I－K] picks out a part of the scale that is below I and above K. Schwarzchild and Wilkinson (2002) further state a necessary condition on the truth of the comparative, as shown in (114), in which a main clause (Mn) and a subordinate clause (Sub) function as predicates of intervals I and K respectively, and a differential (Diff) is understood as a predicate applying to the gap between the two intervals.[12] Under the interval-based analysis of comparatives, the condition in (114) is spelled out for (112) in (1115).

(112) John is one inch taller than Mary is.

(113) For intervals I and K.

If K < I, then: $\forall$ J: (J < I & K < J) $\leftrightarrow$ J $\subseteq$ [I－K]

Otherwise [I－K] = 0

(114) $\exists$I $\exists$K [Mn(I) & Sub(K) & Diff([I－K])].

(115) $\exists$I $\exists$K [tall'(John, I) & tall'(Mary, K) & one-inch'([I－K])].

'There is an interval I on the height scale such that John is I-tall, there is another interval K such that Mary is K-tall, and I differs from K by one inch.'

4.3.2 The obligatory occurrence of *yi-dianer/yi-xie* 'a little' and the optional occurrence of the referential NP functioning as the target of comparison

Following Liu's (2007) analysis of the X A (Y) D comparative, we propose that

[12] Schwarzchild and Wilkinson (2002) define two differentials—SOME and NO—in (i). When there is no overt differential in the comparative, Diff is realized as SOME, which says that an interval is equal to or greater than some contextually specified minimum.

(i) a. SOME(J) = 1 iff the size of J equals or exceeds δ, where δ is determined by context.

b. NO(J) = 1 iff the size of J is less than or equal to δ, where δ is determined by context.

the X *shaowei* A Y *yi-dianer/yi-xie* comparative contains the covert verbal suffix *–ex*, which is grammaticalized from its overt counterpart *–guo* 'exceed'. The X *shaowei* A Y *yi-dianer*/*yi-xie* comparative, for example (116a), has a logical structure like (116b) under the interval-based analysis of the X *shaowei* A Y *yi-dianer*/*yi-xie* comparative (cf. Schwarzchild and Wilkinson 2002).

(116) a. Wangwu shaowei gao Zhaoying yi-dianer.
Wangwu slightly tall Zhaoying a-little
'Wangwu is a little bit taller than Zhaoying.'

b. ∃I ∃K [gao'(Wangwu, I)&gao'(Zhaoying, K)&yi-dianer'([I－K])].
'There is an interval I on the height scale such that Wangwu is I-tall, there is another interval K such that Zhaoying is K-tall, and I differs from K by a little.'

As (116b) indicates, the measure phrase *yi-dianer* 'a little' is understood as the predicate that applies to the gap (i.e. the interval [I－K]) spanning from Zhaoying's height up to Wangwu's height. In other words, the measure phrase *yi-dianer* 'a little' restricts the interval argument of the adjective *gao* 'tall'.

One of the characteristics of the X *shaowei* A Y *yi-dianer*/*yi-xie* comparative is that the measure phrase *yi-dianer/yi-xie* 'a little' is obligatorily required, as the example in (117) indicates. Based on Liu's (2007) analysis of the X A (Y) D comparative, grammaticalization makes the semantic content of the covert verbal suffix *-ex* (i.e. the *exceeding* meaning) in the X *shaowei* A Y *yi-dianer*/*yi-xie* comparative bleached to such an extent that the covert verbal suffix *–ex* is incapable of functioning as a predicate strong enough to restrict the interval argument of the adjective. Since the measure phrase *yi-dianer/yi-xie* 'a little' is the only expression

available to restrict the interval argument of the adjective, its presence is obligatorily required in the X *shaowei* A Y *yi-dianer*/*yi-xie* comparative.

(117) Wangwu shaowei gao Zhaoying *(yi-dianer).

Wangwu slightly tall Zhaoying a-little

'Wangwu is a little bit taller than Zhaoying.'

In addition, the referential NP functioning as the target of comparison is optionally required in the X *shaowei* A Y *yi-dianer*/*yi-xie* comparative, as the example in (118) indicates. Based on Liu's (2007) analysis of the X A (Y) D comparative, grammaticalization makes the semantic content of the covert verbal suffix *–ex* (i.e. the *exceeding* meaning) in the X *shaowei* A Y *yi-dianer*/*yi-xie* comparative so bleached that the transitivity force of the covert verbal suffix *–ex* is weak. This makes the presence of the referential NP functioning as the target of comparison optionally required in the X *shaowei* A Y *yi-dianer*/*yi-xie* comparative.

(118) Wangwu shaowei gao (Zhaoying) yi-dianer.

Wangwu slightly tall Zhaoying a-little

'Wangwu is a little bit taller than Zhaoying.'

In summary, the obligatory presence of the measure phrase *yi-dianer/yi-xie* 'a little' and the optional occurrence of the referential NP functioning as the target of comparison in the X *shaowei* A Y *yi-dianer*/*yi-xie* comparative can be attributed to the bleached semantic content of the covert verbal suffix *–ex* involved in the X *shaowei* A Y *yi-dianer*/*yi-xie* comparative.

Chapter 5

Apparent Seclectional Restrictions

5.1 Introduction

In this chapter, we discuss the cooccurrence of the measure phrase *yi-dianer*/*yi-xie* 'a little' and degree adverbs belonging to the weak group of the second type and the strong group of the third type in Type I-IV comparative constructions, and that of the measure phrase *yi-dianer*/*yi-xie* 'a little' and *bi*-constituents in Chinese *bi* comparatives (see Lu and Ma 1999). In section 5.2, we first introduce Lu and Ma's (1999) classification of degree adverbs in Mandarin Chinese as preliminaries, and then we account for the apparent selectional restrictions between *yi-dianer*/*yi-xie* 'a little' and the degree adverb belonging to the strong group of the third type in Type I-IV comparative constructions. Finally we explain the apparent selectional restrictions between *yi-dianer*/*yi-xie* 'a little' and the degree adverb belonging to the weak group of the second type in Type I-IV comparative constructions. In 5.3, we provide an explanation of the apparent selectional restrictions between *yi-dianer*/*yi-xie* 'a little' and the *bi*-constituent in Chinese *bi* comparatives. Finally, the summary will be made in section 5.4.

5.2 The apparent selectional restrictions between *yi-dianer*/*yi-xie* 'a little' and the degree adverb

5.2.1 Preliminary: Degree adverbs in Mandarin Chinese

It has been argued, by Lu and Ma (1999), that degree adverbs in Mandarin Chinese can be classified into three types in terms of their compatibility with the following types of comparative constructions, where X and Y represent the comparison items, and F stands for the degree adverb.

(119) Type I Xiang-bi zhixia, X + F + AP

with-compare under X + F + AP

Type II Bijiao qil-ai, X + F + AP

compare arise-come X + F + AP

Type III Gen Y xiang-bi, X + F + AP

with Y with-compare X + F + AP

Type IV Bi-qi Y lai, X + F + AP

compare-arise Y come X + F + AP

Type V Zai … zhong/shang, X + F + AP

at among/upside X + F + AP

Type VI X + bi Y + F + AP

X + compare Y + F + AP

Each type of degree adverb can be further classified into a strong and a weak subgroup in light of its high- or low-level on the scale associated with the adjective involved. Degree adverbs which belong to the strong group of the first type include *hen* 'very', *ting* 'very', *shifen* 'very', *wanfen* 'extremely', *feichang* 'extremely', *yichang* 'extraordinarily', tai 'too', *ji* 'extremely', and *jiduan* 'extremely', whereas those belonging to the weak group include *youdianer* 'a bit' and *youxie* 'a bit'. Lu and Ma (1999) further suggest that degree adverbs of this type are not compatible with any of the six types of comparative constructions listed in (119), as shown below.

(120) a. *Xiang-bi zhixia, zhe-jian jiaoshi hen/youdianer da.

with-compare under this-CL classroom very/a.bit big

b. *Bijiao qil-ai, Lisi hen/youdianer gao.

compare arise-come Lisi very/a.bit tall

c. *Gen Lisi xiang-bi, Wangwu hen/youdianer gao.

with Lisi with-compare Wangwu very/a.bit tall

d. *Bi-qi Lisi lai, Wangwu hen/youdianer gao.

compare-arise Lisi come Wangwu very/a.bit tall

e. *Zai women dangzhong, Lisi hen/youdianer gao.

at 1pl among Lisi very/a.bit tall

f. *Lisi bi Wangwu hen/youdianer gao.

Lisi compare Wangwu very/a.bit tall

The second type of degree adverb only occurs in Type I-V comparative constructions. Among adverbs of this type, those belonging to the strong group include *zui* 'the most', *zuiwei* 'the most', and *ding* 'the most', whereas the weak group has *bijiao* 'comparatively', *jiao* 'comparatively', *jiaowei* 'comparatively', and hai_1 'moderately' as members.[13]

(121) a. Xiang-bi zhixia, zhe-shuang xie zui/jiao pianyi.

with-compare under this-CL shoe the.most/comparatively cheap

'By comparison, this pair of shoes is the cheapest/cheaper.'

b. Bijiao qil-ai, Lisi zui/jiao gao.

compare arise-come Lisi the.most/comparatively tall

'By comparison, Lisi is the tallest/taller.'

c. Gen qita ren xiang-bi, Lisi zui/jiao gao.

[13] *Hai* as an adverb has two meanings. The first meaning, notated as hai_1, signifies the low-level on the scale associated with the adjective involved, and roughly corresponds to *shang* 'still' in Archaic Chinese. The second meaning, notated as hai_2, signifies the high-level on the scale associated with the adjective involved, and roughly corresponds to *geng* 'even more'.

with other person with-compare Lisi the.most/comparatively tall

'Compared to everyone else, Lisi is the tallest/taller.'

d. Bi-qi qita ren lai, Lisi zui/jiao gao.

compare-arise other person come Lisi the.most/comparatively tall

'Compared to everyone else, Lisi is the tallest/taller.'

e. Zai women dangzhong, Lisi zui/jiao gao.

at 1pl among Lisi the.most/comparatively tall

'Among us, Lisi is the tallest/taller.'

f. *Lisi bi Wangwu zui/jiao gao.

Lisi compare Wangwu the.most/comparatively tall

For the third type of degree adverb, the strong group includes *geng* 'even more', *gengjia* 'even more', *gengwei* 'even more', *yuefa* 'even more', *yuejia* 'even more', *yujia* 'even more', and *hai*$_2$ 'still' while the weak group has adverbs like *shaowei* 'slightly', *shao* 'slightly', *shaoshao* 'slightly', *duoshao* 'more or less', *luewei* 'slightly', and *luelue* 'slightly' as members. Degree adverbs belonging to this type can only occur in Type I-IV and Type VI comparative constructions, as illustrated below. It is noteworthy that members of the weak group must take a quantificational expression like *yi-dianer* 'a little' or *yi-xie* 'a little' as a post-adjectival pseudo-object.

(122) a. Xiang-bi zhixia, zhe-jian jiaoshi geng da/shaowei da yi-xie.

with-compare under this-CL classroom even.more big/slightly big a-little

'By comparison, this classroom is even bigger/a little bit bigger.'

b. Bijiao qi-lai, Lisi geng gao/shaowei gao yi-xie.

compare arise-come Lisi even .more tall/slightly tall a-little

'By comparison, Lisi is even taller/a little bit taller.'

c. Gen Lisi xiang-bi, Wangwu geng gao/shaowei gao yi-xie.
with Lisi with-compare Wangwu even.more tall/slightly tall a-little
'Compared to Lisi, Wangwu is even taller/a little bit taller.'

d. Bi-qi Lisi lai, Wangwu geng gao/shaowei gao yi-xie.
compare-arise Lisi come Wangwu even.more tall/slightly tall a-little
'Compared to Lisi, Wangwu is even taller/a little bit taller.'

e. *Zai women dangzhong, Lisi geng gao/shaowei gao yi-xie.
at 1pl among Lisi even.more tall/slightly tall a-little

f. Lisi bi Wangwu geng gao/shaowei gao yi-xie.
Lisi compare Wangwu even.more tall/slightly tall a little
'Lisi is even taller/a little bit taller than Wangwu.'

The distribution of degree adverbs in the six types of comparative constructions listed in (119) illustrates that degree adverbs of the second type and degree adverbs of the third type are compatible with comparison while degree adverbs of the first type are not. In addition, Lu and Ma (1999) suggest that degree adverbs of the first type correspond to what Wang (1985: 131-132) terms absolute degree adverbs while degree adverbs of the second type and degree adverbs of the third type correspond to what Wang (1985: 131-132) terms relative degree adverbs.

5.2.2 The apparent selectional restrictions between *yi-dianer*/*yi-xie* 'a little' and the degree adverb belonging to the weak group of the second type

For the second type of degree adverb, the weak group occurring in Type I-IV comparative constructions, as Lu and Ma (1999) note, also can take a quantificational expression like *yi-dianer* 'a little' or *yi-xie* 'a little' as a post-adjectival pseudo-object, as exemplified in (123-126). That is to say, the quantificational expression *yi-dianer*

‘a little’ or *yi-xie* ‘a little’ can cooccur with degree adverbs belonging to the weak group of the second type.

(123) a. Xiang-bi zhixia, Lisi bijiao gao.
with-compare under Lisi comparatively tall
‘By comparison, Lisi is taller.’

b. Xiang-bi zhixia, Lisi bijiao gao yi-xie.
with-compare under Lisi comparatively tall a-little
‘By comparison, Lisi is a bit taller.’

(124) a. Bijiao qil-ai, zhe-liang qiche jiaowei anggui.
compare arise-come this-CL car comparatively expensive
‘By comparison, this car is more expensive.’

b. Bijiao qil-ai, zhe-liang qiche jiaowei anggui yi-xie.
compare arise-come this-CL car comparatively expensive a-little
‘By comparison, this car is a bit more expensive.’

(125) a. Gen qita gongchang xiang-bi, zhe-jian gongchang de shebei
with other factory with-compare this-CL factory DE equipment
jiao hao.
comparatively good
‘Compared to the other factories, the equipment of this factory is better.’

b. Gen qita gongchang xiang-bi, zhe-jian gongchang de shebei
with other factory with-compare this-CL factory DE equipment
jiao hao yi-dianer.
comparatively good a-little
‘Compared to the other factories, the equipment of this factory is a bit better.’

(126) a. Bi-qi qita shu lai, zhe-ben shu hai youqu.

compare-arise other book come this-CL book moderately interesting

'Compared to the other books, this book is moderately interesting.'

b. Bi-qi qita shu lai, zhe-ben shu hai youqu

compare-arise other book come this-CL book moderately interesting

yi-dianer.

a-little

'Compared to the other books, this book is moderately interesting, but only by a little.'

Superficially, there are selectional restrictions between *yi-dianer*/*yi-xie* 'a little' and the degree adverb belonging to the weak group of the second type. Selectional restrictions are the hallmark of head-argument relationships. It is thus reasonable to conclude that the degree adverb which belongs to the weak group of the second type is the syntactic argument of the quantificational expression *yi-dianer*/*yi-xie* 'a little'. However, there is evidence to prove that such conclusion is invalid. First, if the degree adverb which belongs to the weak group of the second type were the syntactic argument of the quantificational expression *yi-dianer*/*yi-xie* 'a little', the presence of the head *yi-dianer*/*yi-xie* 'a little' would be obligatory. On the contrary, the quantificational expression *yi-dianer*/*yi-xie* 'a little' is optionally required, as examples in (123-126) indicate. Second, if the degree adverb which belongs to the weak group of the second type were the syntactic argument of the quantificational expression *yi-dianer*/*yi-xie* 'a little', the quantificational expression *yi-dianer*/*yi-xie* 'a little' would be the only expression available to restrict the interval argument of the adjective, and its presence would be obligatory. Nevertheless, as exemplified in (123-126), the quantificational expression *yi-dianer*/*yi-xie* 'a little' is optionally required.

Although the assumption that the degree adverb which belongs to the weak group of the second type is the syntactic argument of the quantificational expression *yi-dianer*/*yi-xie* 'a little' is proved to be untenable, it is justifiable that the degree adverb belonging to the weak group of the second type restricts the interval argument of the adjective in Type I-IV comparative constructions. Consider first the degree adverbs in (123-126). In (123) the degree adverb *bijiao* 'comparatively' requires the interval of a tallness scale containing Lisi's height to lie above the interval containing the heights of the contextually determined objects functioning as the targets of comparison. In (124) the degree adverb *jiaowei* 'comparatively' requires the interval of the price scale corresponding to *zhe-liang qiche* 'this car' to lie above the interval corresponding to the contextually determined objects functioning as the targets of comparison. In (125) the degree adverb *jiao* 'comparatively' requires the interval on the goodness scale associated with *zhe-jian gongchang de shebei* 'the equipment of this factory' to lie above the interval associated with *qita gongchang (de shebei)* '(the equipment of) the other factories'. In (126) the degree adverb *hai* 'moderately' not only requires the interval on the interestingness scale associated with *zhe-ben shu* 'this book' to lie above the interval associated with *qita shu* 'the other books' but also presupposes that the interval associated with *zhe-ben shu* 'this book' lies in the vicinity of a context-dependent standard of interestingness. The generalization drawn from these facts is that the combination of the degree adverb belonging to the weak group of the second type and the adjective denotes a property that is true of an object *x* if there is an interval on the adjective's scale higher than the interval associated with the objects functioning as the targets of comparison, and the interval associated with *x* on the adjective's scale equals that. In other words, degree adverbs belonging to the weak group of the second type map gradable adjectives into properties of individuals by restricting the interval argument of the adjective.

The argument that the degree adverbs in (123-126) restrict the interval argument of the adjective helps explain the fact that the presence of the quantificational expression *yi-dianer*/*yi-xie* 'a little' is optional. Since the interval argument of the adjective has been restricted by the degree adverb, the quantificational expression *yi-dianer*/*yi-xie* 'a little', which also restricts the interval argument of the adjective, is optionally required in Type I-IV comparative constructions.

On the whole, it not implausible to conclude that degree adverbs which belong to the weak group of the second type impose restrictions on the interval argument of the adjective rather than have a selectional relation with the quantificational expression *yi-dianer*/*yi-xie* 'a little' in Type I-IV comparative constructions.

5.2.3 The apparent selectional restrictions between *yi-dianer*/*yi-xie* 'a little' and the degree adverb belonging to the strong group of the third type

For the third type of degree adverb, the strong group occurring in Type I-IV comparative constructions, as Lu and Ma (1999) point out, can take a quantificational expression like *yi-dianer* 'a little' or *yi-xie* 'a little' as a post-adjectival pseudo-object, as examples in (127-130) illustrate. In other words, the quantificational expression *yi-dianer*/*yi-xie* 'a little' can cooccur with degree adverbs belonging to the strong group of the third type.

(127) a. Xiang-bi zhixia, zhe-jian jiaoshi geng da.
with-compare under this-CL classroom even.more big
'By comparison, this classroom is even bigger.'

b. Xiang-bi zhixia, zhe-jian jiaoshi geng da yi-xie.
with-compare under this-CL classroom even.more big a-little

‘By comparison, this classroom is even bigger, but only by a little.’

(128) a. Bijiao qi-lai, zhe-liang qiche gengjia anggui.

compare arise-come this-CL car even .more expensive

‘By comparison, this car is even more expensive.’

b. Bijiao qi-lai, zhe-liang qiche gengjia anggui yi-dianer.

compare arise-come this-CL car even .more expensive a-little

‘By comparison, this car is even more expensive, but only by a little.’

(129) a. Gen na-ben shu xiang-bi, zhe-ben shu gengwei youqu.

with that-CL book with-compare this-CL book even.more interesting

‘Compared to that book, this book is even more interesting.’

b. Gen na-ben shu xiang-bi, zhe-ben shu gengwei youqu

with that-CL book with-compare this-CL book even.more interesting

yi-xie.

a-little

‘Compared to that book, this book is even more interesting, but only by a little.’

(130) a. Bi-qi qian ji nian lai, xianzai zhe-jian gongchang de

compare-arise previous several year come now this-CL factory DE

shebei yuefa xianjin le.

equipment even.more advanced SFP

‘Compared to the previous several years, the equipment of this factory now is even more advanced.’

b. Bi-qi qian ji nian lai, xianzai zhe-jian gongchang de

compare-arise previous several year come now this-CL factory DE

shebei yuefa xianjin yi-xie le.

equipment even.more advanced a-little SFP

'Compared to the previous several years, the equipment of this factory now is even more advanced, but only by a little.'

On the surface, there are selectional restrictions between *yi-dianer*/*yi-xie* 'a little' and the degree adverb belonging to the strong group of the third type. Selectional restrictions are the hallmark of head-argument relationships. It is thus reasonable to conclude that the degree adverb which belongs to the strong group of the third type is the syntactic argument of the quantificational expression *yi-dianer*/*yi-xie* 'a little'. However, there is evidence against such conclusion. First, if the degree adverb which belongs to the strong group of the third type were the syntactic argument of the quantificational expression *yi-dianer*/*yi-xie* 'a little', the presence of the head *yi-dianer*/*yi-xie* 'a little' would be obligatory. On the contrary, the quantificational expression *yi-dianer*/*yi-xie* 'a little' is optionally required, as examples in (127-130) indicate. Second, if the degree adverb which belongs to the strong group of the third type were the syntactic argument of the quantificational expression *yi-dianer*/*yi-xie* 'a little', the quantificational expression *yi-dianer*/*yi-xie* 'a little' would be the only expression available to restrict the interval argument of the adjective, and its presence would be obligatory. Nevertheless, as exemplified in (127-130), the quantificational expression *yi-dianer*/*yi-xie* 'a little' is optionally required.

Instead of positing that the degree adverb which belongs to the strong group of the third type is the syntactic argument of the quantificational expression *yi-dianer*/*yi-xie* 'a little', there are reasons for thinking that the degree adverb belonging to the strong group of the third type restricts the interval argument of the adjective in Type I-IV comparative constructions. Consider first the degree adverbs in (127-130). In (127) the degree adverb *geng* 'even more' presupposes that both the

interval containing the size of *zhe-jian jiaoshi* ‘this classroom’ and the interval containing the sizes of the contextually determined objects functioning as the targets of comparison are higher than a context-dependent standard on the scale associated with the adjective *da* ‘big’, and requires the former interval to lie above the latter one. In (128) the degree adverb *gengjia* ‘even more’ presupposes that both the interval containing the cost of *zhe-liang qiche* ‘this car’ and the interval containing the costs of the contextually determined objects functioning as the targets of comparison lie above a context-dependent standard of expensiveness, and requires the former interval to be higher than the latter one. In (129) the degree adverb *gengwei* ‘even more’ presupposes that both the interval associated with *zhe-ben shu* ‘this book’ and the interval associated with *na-ben shu* ‘that book’ are higher than a context-dependent standard on the scale associated with the adjective *youqu* ‘interesting’, and requires the former interval to lie above the latter one. In (130) the degree adverb *yuefa* ‘even more’ presupposes that both the interval associated with *xianzai zhe-jian gongchang de shebei* ‘the equipment of this factory now’ and the interval associated with *qian ji nian (zhe-jian gongchang de shebei)* ‘(the equipment of this factory in) the previous several years’ lie above a context-dependent standard of advancedness, and requires the former interval to be higher than the latter one. Crucially, these facts indicate that the combination of the degree adverb belonging to the strong group of the third type and the adjective denotes a property that is true of an object *x* if there is an interval on the adjective’s scale higher than the interval associated with the objects functioning as the targets of comparison, and the interval associated with *x* on the adjective’s scale equals that, with the presupposition that both intervals under comparison are above a standard on the scale associated with the adjective. In other words, degree adverbs belonging to the strong group of the third type map gradable adjectives into properties of individuals by restricting the interval argument of the adjective.

The argument that the degree adverbs in (127-130) restrict the interval argument of the adjective helps account for the fact that the occurrence of the quantificational expression *yi-dianer*/*yi-xie* 'a little' is optional. Since the interval argument of the adjective has been restricted by the degree adverb, the quantificational expression *yi-dianer*/*yi-xie* 'a little', which also restricts the interval argument of the adjective, is optionally required in Type I-IV comparative constructions.

Altogether, degree adverbs which belong to the strong group of the third type impose restrictions on the interval argument of the adjective rather than have a selectional relation with the quantificational expression *yi-dianer*/*yi-xie* 'a little' in Type I-IV comparative constructions.

5.3 The apparent selectional restrictions between *yi-dianer*/*yi-xie* 'a little' and the *bi*-constituent

It is characteristic of Chinese *bi* comparatives that the *bi*-constituent which is composed of the morpheme *bi* 'compare' and the referential NP functioning as the target of comparison can take a quantificational expression like *yi-dianer* 'a little' or *yi-xie* 'a little' as a post-adjectival pseudo-object, as exemplified in (131-132). That is to say, the quantificational expression *yi-dianer* 'a little' or *yi-xie* 'a little' can cooccur with the *bi*-constituent in Chinese *bi* comparatives.

(131) a. Lisi bi Wangwu gao.
Lisi compare Wangwu tall
'Lisi is taller than Wangwu.'

b. Lisi bi Wangwu gao yi-dianer.
Lisi compare Wangwu tall a-little

'Lisi is a bit taller than Wangwu.'

(132) a. zhe-ben shu bi na-ben shu youqu.
this-CL book compare that-CL book interesting
'This book is more interesting than that book.'

b. zhe-ben shu bi na-ben shu youqu yi-xie.
this-CL book compare that-CL book interesting a-little
'This book is a bit more interesting than that book.'

At a superficial level, there are selectional restrictions between *yi-dianer*/*yi-xie* 'a little' and the *bi*-constituent. Selectional restrictions are the hallmark of head-argument relationships. It is thus reasonable to conclude that the *bi*-constituent is the syntactic argument of the quantificational expression *yi-dianer*/*yi-xie* 'a little'. However, there is evidence against such conclusion. First, if the *bi*-constituent were the syntactic argument of the quantificational expression *yi-dianer*/*yi-xie* 'a little', the presence of the head *yi-dianer*/*yi-xie* 'a little' would be obligatory. On the contrary, the quantificational expression *yi-dianer*/*yi-xie* 'a little' is optionally required, as examples in (131-132) indicate. Second, if the *bi*-constituent were the syntactic argument of the quantificational expression *yi-dianer*/*yi-xie* 'a little', the quantificational expression *yi-dianer*/*yi-xie* 'a little' would be the only expression available to restrict the interval argument of the adjective, and its presence would be obligatory. Nevertheless, as exemplified in (131-132), the quantificational expression *yi-dianer*/*yi-xie* 'a little' is optionally required.

Instead of positing that the *bi*-constituent is the syntactic argument of the quantificational expression *yi-dianer*/*yi-xie* 'a little', there are reasons for thinking that the *bi*-constituent restricts the interval argument of the adjective in Chinese *bi* comparatives. Consider first the *bi*-constituents in (131-132). In the case of (131), the

bi-constituent *bi Wangwu* ‘compare Wangwu’ requires the interval of the height scale corresponding to *Lisi* ‘Lisi’ to lie above the interval corresponding to *Wangwu* ‘Wangwu’. In the case of (132), the *bi*-constituent *bi na-ben shu* ‘compare that book’ requires the interval on the interestingness scale associated with *zhe-ben shu* ‘this book’ to be higher than the interval associated with *na-ben shu* ‘that book’. The generalization drawn from these facts is that the combination of the *bi*-constituent and the adjective denotes a property that is true of an object *x* if there is an interval on the adjective’s scale higher than the interval associated with the object functioning as the target of comparison, and the interval associated with *x* on the adjective’s scale equals that. In other words, *bi*-constituents map gradable adjectives into properties of individuals by restricting the interval argument of the adjective.

The argument that the *bi*-constituents in (131-132) restrict the interval argument of the adjective helps account for the fact that the presence of the quantificational expression *yi-dianer*/*yi-xie* ‘a little’ is optional. Since the interval argument of the adjective has been restricted by the *bi*-constituent, the quantificational expression *yi-dianer*/*yi-xie* ‘a little’, which also restricts the interval argument of the adjective, is optionally required in Chinese *bi* comparatives.

On balance, *bi*-constituents impose restrictions on the interval argument of the adjective rather than have a selectional relation with the quantificational expression *yi-dianer*/*yi-xie* ‘a little’ in Chinese *bi* comparatives.

5.4 Summary

The conclusion to be drawn from the above discussion is as follows: First, while *yi-dianer*/*yi-xie* ‘a little’ can cooccur with degree adverbs belonging to the weak group of the second type in Type I-IV comparative constructions, degree adverbs belonging to the weak group of the second type restrict the interval argument of the adjective

instead of having a selectional relation with *yi-dianer*/*yi-xie* ‘a little’. Second, degree adverbs belonging to the strong group of the third type saturate the interval argument of the adjective rather than have a selectional relation with *yi-dianer*/*yi-xie* ‘a little’ even though *yi-dianer*/*yi-xie* ‘a little’ can cooccur with degree adverbs belonging to the strong group of the third type in Type I-IV comparative constructions. Third, although *yi-dianer*/*yi-xie* ‘a little’ can cooccur with *bi*-constituents in Chinese *bi* comparatives, *bi*-constituents restrict the interval argument of the adjective instead of having a selectional relation with *yi-dianer*/*yi-xie* ‘a little’.

Chapter 6

Conclusion

In this thesis, we examined the X *shaowei* A Y *yi-dianer/yi-xie* comparative in Mandarin Chinese—*Wangwu shaowei gao Zhaoying yi-xie* 'Wangwu is a little bit taller than Zhaoying' for example.

In Chapter 2, we discussed the syntactic and semantic properties of the X *shaowei* A Y *yi-dianer/yi-xie* comparative. First, the predicative adjective in this type of comparative takes an indirect-object-like referential NP complement which functions as the target of comparison, and a measure phrase which shows the differential between the two compared degree values along the scale denoted by the adjectival predicate. Second, there are selectional restrictions between the measure phrase *yi-dianer/yi-xie* 'a little' and the degree adverb *shaowei* 'slightly', but it is not possible for *yi-dianer/yi-xie* 'a little' and *shaowei* 'slightly' to appear together. Third, the measure phrase *yi-dianer/yi-xie* 'a little' is obligatorily required in the X *shaowei* A Y *yi-dianer/yi-xie* comparative. Fourth, the degree adverb *shaowei* 'slightly' is optionally required in the X *shaowei* A Y *yi-dianer/yi-xie* comparative. Fifth, the referential NP functioning as the target of comparison is optionally required in the X *shaowei* A Y *yi-dianer/yi-xie* comparative. Sixth, the X *shaowei* A Y *yi-dianer/yi-xie* comparative involves explicit comparison. Having looked at the properties shown by the X *shaowei* A Y *yi-dianer/yi-xie* comparative in Mandarin Chinese, we dealt with the following questions that any analysis of the X *shaowei* A Y *yi-dianer/yi-xie* comparative must address: First, how can we accommodate the selectional restrictions between the measure phrase *yi-dianer/yi-xie* 'a little' and the degree adverb *shaowei* 'slightly' as well as the obligatory nonadjacency between *yi-dianer/yi-xie* 'a little' and *shaowei* 'slightly' in a single structure? Second, why is *yi-dianer/yi-xie* 'a little'

obligatorily required in the X *shaowei* A Y *yi-dianer/yi-xie* comparative? Third, what is the reason that *shaowei* 'slightly' is optionally required in the X *shaowei* A Y *yi-dianer/yi-xie* comparative? Fourth, why is the referential NP functioning as the target of comparison optionally required in the X *shaowei* A Y *yi-dianer/yi-xie* comparative?

Next, we reviewd previous works on the Chinese comparative construction without the marker *bi* 'compare', including the analyses proposed by Chao (2005), Xiang (2005), Erlewine (2007) and Liu (2007). We showed that some problems arise in these analyses. Therefore, in Chapter 4, we gave our proposal and attempted to offer a more generalized explanation for the syntactic and semantic characteristics that lie in the X *shaowei* A Y *yi-dianer/yi-xie* comparative.

Following Bhatt and Pancheva's (2004) analysis of English comparatives and Liu's (2007) analysis of the X A (Y) D comparative, we proposed that the degree adverb *shaowei* 'slightly' is merged countercyclically as the complement of the covert quantificational operator binding *yi-dianer/yi-xie* 'a little', which is treated as a variable, after the covert quantificational operator adjoins to ExP. This proposal is supported by the evidence related to intervention effects on NPIs and A-not-A operators. Moreover, the degree adverb *shaowei* 'slightly', which is the syntactic argument of the covert quantificational operator, is optionally required in the X *shaowei* A Y *yi-dianer/yi-xie* comparative. Following Liu's (2007) analysis of the X A (Y) D comparative, we proposed that the X *shaowei* A Y *yi-dianer/yi-xie* comparative contains the covert verbal suffix *–ex*, which is grammaticalized from its overt counterpart *–guo* 'exceed'. Grammaticalization makes the semantic content of the covert verbal suffix *–ex* (i.e. the *exceeding* meaning) bleached to such an extent that *–ex* cannot function as a predicate strong enough to restrict the interval argument of the adjective. This makes the measure phrase *yi-dianer/yi-xie* 'a little', which is the

only expression available to restrict the interval argument of the adjective, obligatorily required in the X *shaowei* A Y *yi-dianer/yi-xie* comparative. Grammaticalization also makes the semantic content of the covert verbal suffix *–ex* so bleached that the transitivity force of *–ex* is weak. This makes the referential NP functioning as the target of comparison optionally required in the X *shaowei* A Y *yi-dianer/yi-xie* comparative.

Finally, we argued that although both degree adverbs belonging to the weak group of the second type and degree adverbs belonging to the strong group of the third type can take the measure phrase *yi-dianer*/*yi-xie* 'a little' as a post-adjectival pseudo-object in Type I-IV comparative constructions, these degree adverbs restrict the interval argument of the adjective instead of having a selectional relation with *yi-dianer*/*yi-xie* 'a little' (see Lu and Ma 1999). Likewise, in Chinese *bi* comparatives which contain the *bi*-constituent and the measure phrase *yi-dianer*/*yi-xie* 'a little', the degree adverb saturates the interval argument of the adjective rather than have a selectional relation with *yi-dianer*/*yi-xie* 'a little'.

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Appendix

Alternative Analysis

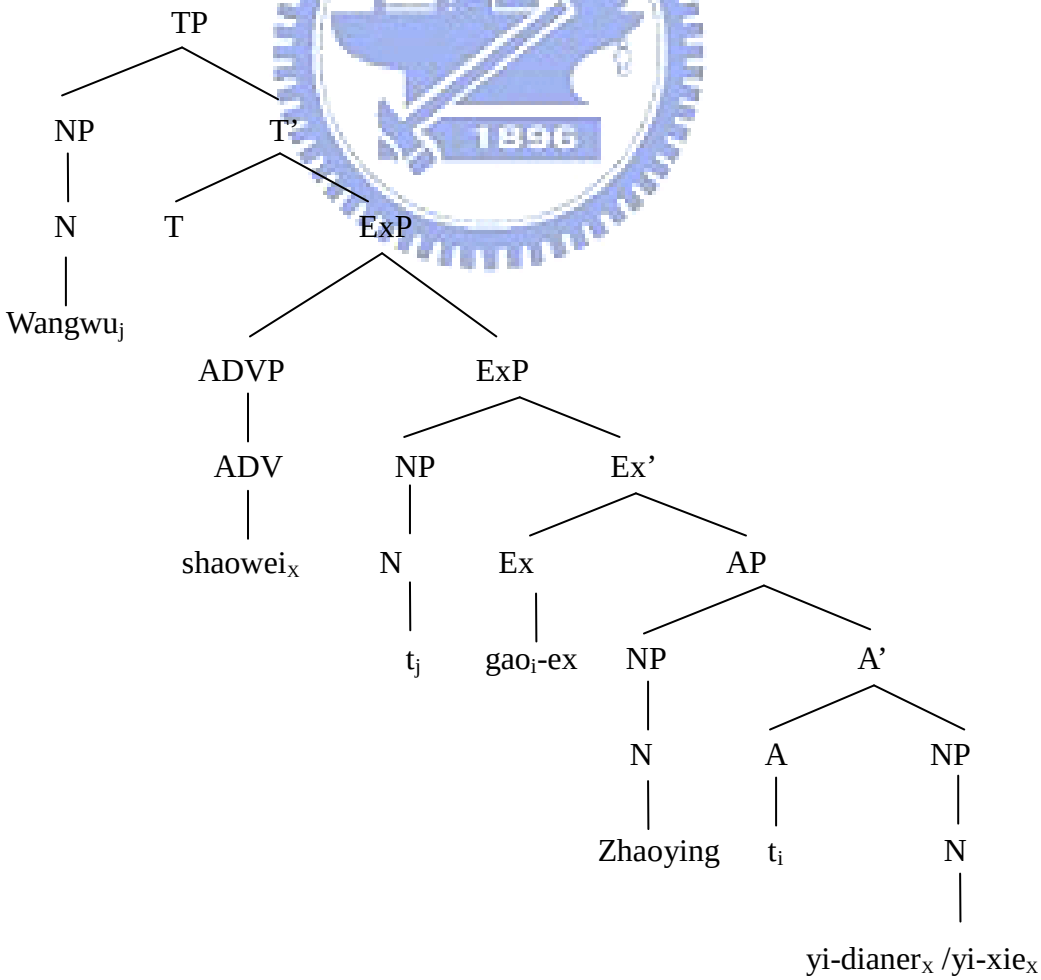
Wei-Tien Dylan Tsai suggests that there is an alternative analysis of the X *shaowei* A Y *yi-dianer*/*yi-xie* comparative. Following Tsai's (1999) Lexical Courtesy Hypothesis (LCH) and Liu's (2007) analysis that the X A (Y) D comparative contains the covert verbal suffix *–guo2*, Wei-Tien Dylan Tsai suspects that the X *shaowei* A Y *yi-dianer*/*yi-xie* comparative such as (1) has an LF representation like (2).

(1) Wangwu shaowei gao Zhaoying yi-dianer/yi-xie.

Wangwu slightly tall Zhaoying a-little/a-little

'Wangwu is a little bit taller than Zhaoying.'

(2)

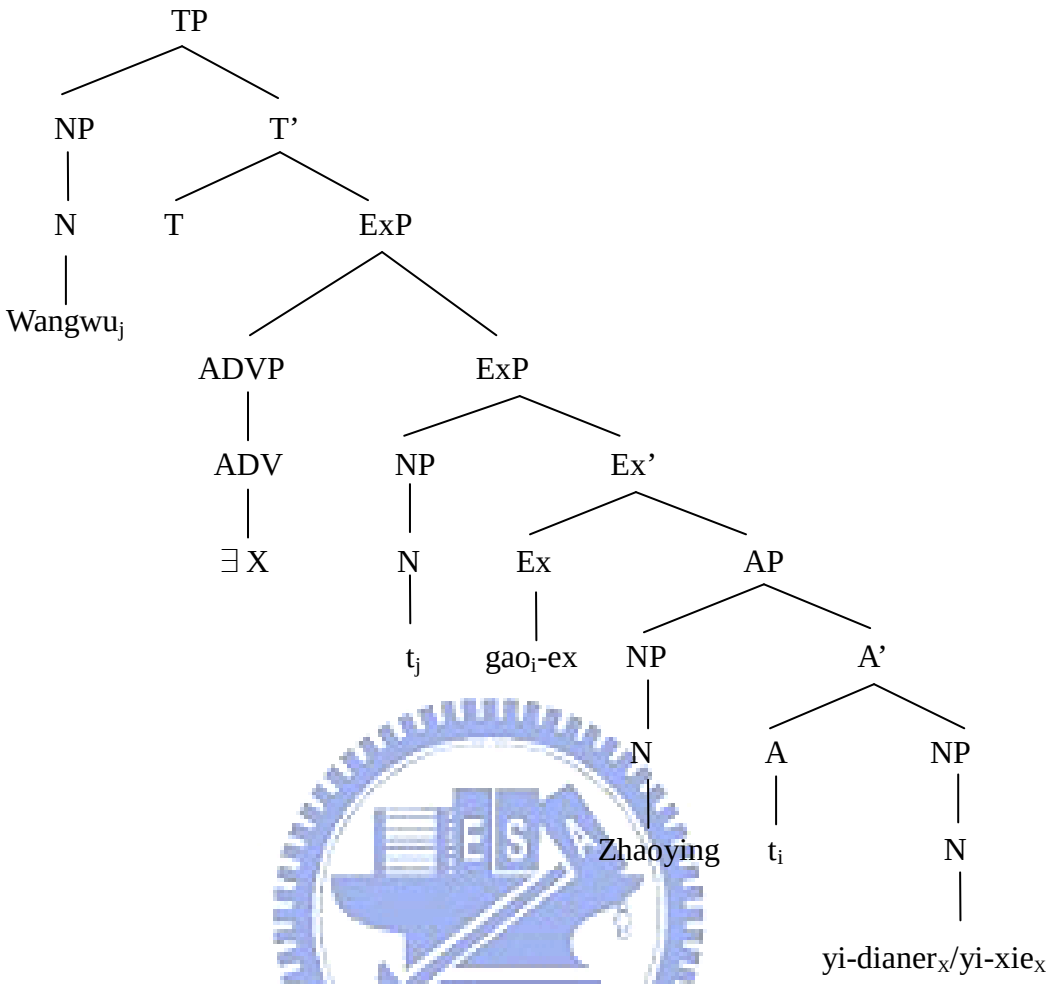


As shown in (2), the measure phrase *yi-dianer/yi-xie* ‘a little’ is a variable which stays in situ and whose scope marking and interpretation are determined by the degree adverb *shaowei* ‘slightly, an overt existential operator which merges with the ExP headed by the covert verbal suffix *–ex* and unselectively binds the measure phrase *yi-dianer/yi-xie* ‘a little’. Since the measure phrase *yi-dianer/yi-xie* ‘a little’ and the degree adverb *shaowei* ‘slightly’ form an operator-variable pair, the measure phrase *yi-dianer/yi-xie* ‘a little’ cooccurs with the degree adverb *shaowei* ‘slightly, as shown in (3).

(3) Wangwu *hen/*zui/*geng/*youdianer/*bijiao/shaowei gao Zhaoying
Wangwu very/the.most/even.more/a.bit/comparatively/slightly tall Zhaoying
yi-dianer/yi-xie.
a-little/a-little
‘Wangwu is a little bit taller than Zhaoying.’

Following Wei-Tien Dylan Tsai’s suggestion, the measure phrase *yi-dianer/yi-xie* ‘a little’ is also a variable which can stay in situ and whose scope marking and interpretation can be determined by a covert existential operator which merges with the ExP headed by the covert verbal suffix *–ex* and unselectively binds the measure phrase *yi-dianer/yi-xie* ‘a little’, as (4) illustrates. Therefore, the presence of the degree adverb *shaowei* ‘slightly, which is an overt existential operator, is not obligatorily required in the X *shaowei* A Y *yi-dianer/yi-xie* comparative, as shown in (5).

(4)



(5) a. Wangwu shaowei gao Zhaoying yi-dianer/yi-xie.

Wangwu slightly tall Zhaoying a-little/a-little

'Wangwu is a little bit taller than Zhaoying.'

b. Wangwu gao Zhaoying yi-dianer/yi-xie.

Wangwu tall Zhaoying a-little/a-little

'Wangwu is a little bit taller than Zhaoying.'

In addition, following the reasoning, the discourse factors affect the presence of the referential NP functioning as the target of comparison. Therefore, the referential NP functioning as the target of comparison in the X *shaowei* A Y *yi-dianer*/*yi-xie* comparative can be omitted, as (6) illustrates.

(6) a. Wangwu shaowei gao Zhaoying yi-dianer/yi-xie.

Wangwu slightly tall Zhaoying a-little/a-little

'Wangwu is a little bit taller than Zhaoying.'

b. Wangwu shaowei gao yi-dianer/yi-xie.

Wangwu slightly tall a-little/a-little

'Wangwu is a little bit taller.'

In summary, Wei-Tien Dylan Tsai provides an alternative analysis of the X *shaowei* A Y *yi-dianer/yi-xie* comparative to account for the cooccurrence of the measure phrase *yi-dianer/yi-xie* 'a little' and the degree adverb *shaowei* 'slightly, the optional occurrence of the degree adverb *shaowei* 'slightly, and the optional occurrence of the referential NP functioning as the target of comparison in the X *shaowei* A Y *yi-dianer/yi-xie* comparative.