

TOWARD A THEORETICAL ANALYSIS OF CHINESE *BI*-COMPARATIVES*

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Abstract: On the strength of the insights stemming from previous studies (Hashimoto 1971, Fu 1978, Tsao 1989, Paul 1993, Liu 1996, 2011, Shi 2001, Hsing 2003, Lin 2009, Su 2012 among others), the paper attempts to entertain a theoretical analysis of Chinese *bi*-comparatives by offering two constraints that explain and interpret a grammatical *bi*-comparative. One constraint concerns the compared constituents of a *bi*-comparative, and the other regards the comparison predicate. It is hoped that the paper will have some import for linguistic theory and generative grammar.

Key words: Bi-comparatives, constraints, linguistic theory, generative grammar

1. Introduction

Comparative constructions with *bi* in Mandarin Chinese have been discussed widely (Fu 1978, Li and Thompson 1981, Tsao 1989, Liu 1996, 2011, Hsing 2003, Xiang 2005, Chung 2006, Lin 2009, Su 2012 others). It has been a controversial issue whether the *bi*-comparative manifests a phrasal or clausal comparative from the perspectives of syntax and semantics (cf. Xiang 2005, Chao 2005, Erlewine 2007, Lin 2009, Liu 1996, 2011 and Su 2012). In this study we will not fathom this issue but attempt to provide a detailed linguistic description of the syntactic and semantic properties of *bi*-comparatives, thereby yielding two concrete constraints on Chinese *bi*-comparatives.

The objective of this paper is two-fold. First, we would like to propose a constraint on the compared constituent of the *bi*-comparative based on Lin (2009). Second, a constraint on the compared predicate of the *bi*-comparative is also explored. This constraint can be defined by four conditions. To propose the two constraints, an assumption should be taken into consideration first: the comparative marker *bi* forms a preverbal adjunct with its complement (Liu 1996, 2011).

2. The constraint on the compared constituent

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The argument requirement of Chinese *bi*-comparatives proposed by Lin (2009) is stated as follows:

- (1) Argument requirement of Chinese comparatives.

In Mandarin Chinese, compared constituents must be arguments of a gradable predicate of comparison (Lin 2009:17).

This requirement succeeds in explaining a great number of *bi*-comparatives, as illustrated below.¹

- (2) Zhangsan bi Lisi kaixin
Zhangsan com Lisi happy
'Zhangsan is happier than Lisi.'
- (3) Zhangsan shuxue bi wuli xihuan
Zhangsan mathematics com physics like
'Zhangsan likes mathematics more than physics.'
- (4) Zhangsan jintian bi zuotian kaixin²
Zhangsan today com yesterday happy
'Zhangsan today is happier than yesterday.'
- (5) Zhangsan zai jiali bi zai xuexiao kaixin
Zhangsan at home com at school happy
'Zhangsan is happier at home than Zhangsan was in school.'
- (6) wo nuer bi wo taitai pao de kuai
I daughter com I wife run DE fast
'My daughter runs faster than my wife.'

Further scrutinizing the requirement, however, we can find that this requirement might not correctly predict sentences such as (7) and (9), in contrast to (8) and (10) respectively.

- (7) * Zhangsan jintian bi Lisi zai jiali kaixin
Zhangsan today com Lisi at home happy
lit.: 'Today Zhangsan is happier than Lisi is at home.'
- (8) Zhangsan jintian bi Lisi zuotian kaixin
Zhangsan today com Lisi yesterday happy
'Today Zhangsan is happier than Lisi was yesterday.'

¹ The abbreviations used in this paper are: A: adjective, AP: Adjective Phrase, ASP: aspect marker, BA: Chinese the patient marker 'ba', BEI: Chinese passive 'bei', CL: classifier, com: comparative marker, CON: conjunction, CONP: Conjunction Phrase, DP: Demonstrative Phrase, DE: Chinese modifier marker "DE", DEGP: Degree Phrase, GEN: genitive marker, NEG: negation, PRT: (sentence final) particle, QUE: question particle, SUF: suffix.

² As Lin (2009) has suggested, there are reasons to believe that times and locations are more like arguments than adjuncts with respect to *wh*-extraction (see Tsai 1994 for Chinese *wh*-extraction). Semantically, it is often assumed, especially in works studying tense and aspect, that time is an argument of a predicate (e.g. Lin 2003, 2006 for Chinese).

- (9) * Zhangsan xiaoshihou bi Lisi zai jiali congming
 Zhangsan childhood com Lisi at home smart
 ‘Int. Zhangsan was smarter in his childhood than Lisi was at home.’
- (10) Zhangsan xiaoshihou bi Lisi xianzai congming
 Zhangsan childhood com Lisi now smart
 ‘Zhangsan was smarter in his childhood than Lisi is now.’

Both *jintian* ‘today’ and *zai jiali* ‘at home’ are arguments to *kaixin* ‘happy’ in (7). Likewise, *xiaoshihou* ‘childhood’ and *zai jiali* ‘at home’ are arguments to *congming* ‘smart’ in (9). (7) and (9) are ill-formed, indicating the argument requirement of Chinese *bi*-comparatives might be problematic.

Our first pass at a solution to this issue will be simply to augment a semantic specification. Namely, the requirement can be refined as:

- (11) The constraint on the compared constituents of a *bi*-comparative (refined version):

In a *bi*-comparative, the compared constituent and its correlate must be arguments of the comparison predicate, and both of them must have the same dimension.

The modified requirement can straightforwardly elucidate, for example, that although both *xiaoshihou* ‘childhood’ and *zai jiali* ‘at home’ are arguments to *congming* ‘smart’, (9) is yet ill-formed as they do not share the same dimension that is often defined as an intrinsic property of an object. While *xiaoshihou* ‘childhood’ bears the dimension of time, *zai jiali* ‘at home’ the dimension of space.

Note that reason clauses can be the compared constituents in a *bi*-comparative, suggesting that the argument requirement does not seem to hold. For instance:

- (12) Mama yinwei Xiaoming_i shuohuang bi yinwei
 mother because Xiaoming say-lie com because
 tai_i tou qian geng shengqi
 he steal money GENG angry
 ‘Mother was angry more because Xiaoming_i told a lie than because he_i stole money.’ (from Lin 2009)

In general, a reason clause can not be an argument to a comparison predicate; at this point, an alternative is to abandon the requirement. We would like to suggest that the argument requirement is in principle correct, though a semantic condition is additionally required, as indicated by (11). The requirement is still available if we consider a case with manner adjuncts. To specify the merit of the argument requirement of Chinese comparatives, Lin (2009) provides the following sentence.

- (13) * Ta mianqiangdi bi xin-gan-qing-yuan-di daying zuo
 he reluctantly com willingly promise do
 na-jian shi
 that-Cl thing
 lit.: ‘He promised to do it more reluctantly than willingly.’

Lin suggests that the example above demonstrates that the requirement is predicable since manner adjuncts are not arguments. In other words, although (12) illustrates an opposing example, we treat it as an exception to the refined argument requirement of Chinese *bi*-comparatives.

3. The constraint on the comparison predicate

In addition to a constraint on the compared constituent, a constraint concerning the comparison predicate is required. As is well-known, the comparison predicate of a *bi*-comparative must have information denoting gradability.

- (14) Zhangsan bi Lisi gao
 Zhangsan com Lisi gao
 ‘Zhangsan is taller than Lisi.’
 (15) Zhangsan bi Lisi pao de kuai
 Zhangsan com Lisi run DE fast
 ‘Zhangsan runs faster than Lisi.’

(14) and (15) are grammatical as there is a gradable adjective *gao* ‘tall’ in (14) and *kuai* ‘fast’ in (15). Nonetheless, (16) is an ill-formed sentence because *cuo* ‘wrong’ is an absolute adjective.

- (16) * Zhangsan de daan bi Lisi de daan cuo
 Zhangsan PRT answer com Lisi PRT answer wrong

Cuo ‘wrong’ is not a gradable adjective, thereby resulting in ungrammaticality of (16). Also, (15) is ruled out, given that there is no gradability observed in the comparison predicate.

- (17) * Wo de shengri hui bi ni de shengri dao
 my GEN birthday will com you GEN birthday arrive

Along the same vein, the comparison predicate of (17) is *dao* ‘arrive’ which does not bear any information denoting gradability, neither in syntax nor in its lexical content. To solve this, a degree adverb *zao* ‘early’ can be added.

- (18) Wo de shengri hui bi ni de shengri *(zao)
 my GEN birthday will com you GEN birthday early

dao
arrive
'My birthday will come more early than yours.'

The sentence is well-formed owing to addition of a degree adverb that denotes gradability to the comparison predicate.

A modal auxiliary has the same function in remedying an ill-formed sentence.

- (19) * Ta bi ni zuo shengyi
he com you do business

(19) turns out to be grammatical if we augment a modal auxiliary such as *hui* 'can'.

- (20) Ta bi ni *(hui) zuo shengyi
he com you can do business
'He knows how to do business more than you.'

Some action verbs can be construed as grammatical comparison predicates if preceded by modal auxiliaries.

- (21) Zhangsan bi Lisi *(neng) pao
Zhangsan com Lisi can run
'Zhangsan can run faster than Lisi.'
'Zhangsan can run longer than Lisi.'
- (22) Zhangsan bi Lisi *(neng) chi
Zhangsan com Lisi can eat
'Zhangsan can eat more than Lisi.'

(22) means that the capacity for eating that *Zhangsan* has exceeds the capacity for eating that *Lisi* has. Note also that *chi* 'eat' is not a transitive verb in this case, and is combined with *neng* 'can' as a predicate to express a long-standing property, analogous to an individual-level predicate. *Neng* 'can' functions as a degree converter, converting a dynamic activity into a static predicate. The action verb *chi* 'eat' turns into a scalar state when put after the modal *neng* 'can'. In fact, both degree adverbs and modal auxiliaries are prone to have this function (cf. Li & Thompson 1994). Moreover, a predicate headed by *chi* 'eat' can be modified by a degree adverb so as to be gradable. See also (20).

- (23) Zhangsan bi Lisi *(duo) chi le yi-wan fan
Zhangsan com Lisi more eat ASP one-CL rice
'Zhangsan ate one more bowl of rice than Lisi.'

We have also found disyllabic verbs that can be preceded by appropriate modal auxiliaries.

- (24) Zhangsan bi Lisi hui shuohua
 Zhangsan com Lisi can speak
 ‘Zhangsan knows to how to speak properly more than Lisi.’
- (25) Zhangsan bi Lisi neng chiku
 Zhangsan com Lisi can bear.hardship
 ‘Zhangsan can bear more hardship than Lisi.’

We have not known what characteristics these verbs share, though seemingly *shuo-hua* ‘speak’ and *chi-ku* ‘bear hardship’ are verb-object compounds. It should be noted, however, that the modal auxiliary must occur right between the comparative standard and the verb; otherwise, the sentence is ill-formed.

- (26) * Zhangsan hui bi Lisi shuohua
 Zhangsan can com Lisi speak
 lit.: ‘Zhangsan knows to how to speak properly more than Lisi.’

Furthermore, some verbs are capable of being the comparison predicate due to their inherent meanings. Take *zengjia* ‘increase’ for example.

- (27) ? Jinnian de chanliang bi qunian zengjia (le)
 this year GEN production com last.year increase ASP
 ‘The production of this year increased more than that of last year.’

The predicate usually co-exists with the aspect marker *le* ‘ASP’. The aspect marker *le* ‘ASP’ which expresses telicity seems to be obligatory.

- (28) ? Jinnian de chanliang bi qunian zengjia yi
 this year GEN production com last year increase one
 bei
 time
 lit.: ‘The production of this year increases one time than that of last year.’

In contrast to (29), (30) can be grammatical if a negation word is provided.

- (29) * Jinnian de chanliang bi qunian zengjia
 this year GEN production com last.year increase
 lit.: ‘The production of this year increases more than that of last year.’
- (30) Jinnian de chanliang mei(you) bi qunian zengjia
 this year GEN production not com last year increase
 ‘The production of this year did not increase more than that of last year.’

Mei(you) ‘not’ is also an expression of telicity to a completed event. It follows that telicity is a requirement in defining a grammatical comparison predicate, especially when the predicate is headed by a verb.

Although a stative verb such as *xihuan* ‘like’ or *liaojie* ‘understand’ is gradable, it must be transitive in order to signal the accomplishment of a comparison event.³

- (31) Zhangsan bi Lisi xihuan *(shuxue)
 Zhangsan com Lisi like mathematics
 ‘Zhangsan likes mathematics more than Lisi.’
- (32) Zhangsan bi Lisi liaojie *(nuren)
 Zhangsan com Lisi understand woman
 ‘Zhangsan understands women more than Lisi.’

Along the similar line, we can explain why the stative verb *you* ‘have’ should be followed by an object.

- (33) Zhangsan bi Lisi you *(fengdu)
 Zhangsan com Lisi have grace
 ‘Zhangsan is more graceful than Lisi.’
- (34) Zhangsan bi Lisi you *(qian)
 Zhangsan com Lisi have money
 ‘Zhangsan has more money than Lisi.’

Again, stative verbs should be transitive to convey that the comparison event is accomplished.⁴

On the other hand, a stative verb that is intransitive can be the comparison predicate in a DE-complement (see Li & Thompson 1981, Tsao 1989, Huang 2006, Su 2012). Consider the verb *bing* ‘sick’, for example.

³ Stative verbs are usually gradable. Witness sentences with *xihuan* ‘like’ and *liaojie* ‘understand’ individually below.

- (i) Zhangsan hen xihuan shuxue
 Zhangsan very like mathematics
 ‘Zhangsan likes mathematics very much.’
- (ii) Zhangsan hen liaojie ziji
 Zhangsan very like self
 ‘Zhangsan understands himself very much.’

⁴ Many stative verbs can be intransitive. Take *xing* ‘wake’ and *e* ‘hungry’ for example.

- (i) Zhangsan xing le
 Zhangsan wake Asp
 ‘Zhangsan woke up.’
- (ii) Zhangsan xianzai e le
 Zhangsan now hungry Asp
 ‘Zhangsan is hungry.’

- (35) * Zhangsan bi Lisi bing le
 Zhangsan com Lisi sick ASP
- (36) * Zhangsan mei(you) bi Lisi bing
 Zhangsan not com Lisi sick
- (37) Zhangsan bi Lisi bing de zhong
 Zhangsan com Lisi sick DE heavy
 ‘Zhangsan is sicker than Lisi.’

We have not acquired how many these verbs are, nor have we made the generalization they might raise. We leave this issue open for future research.

There are verbs that cannot be the proper comparison predicates without degree adverbs. For the present, the well-formedness of the following sentences associated with these verbs might be greatly influenced by pragmatics.

- (38) Zhangsan bi Lisi *(geng) xiwang qu meiguo jiaoshu
 Zhangsan com Lisi GENG hope go USA teaching
 ‘Zhangsan wants to teach in USA more than Lisi.’
- (39) Zhangsan bi Lisi *(geng) gai zuo na-jian shi
 Zhangsan com Lisi GENG should do that-CL thing
 ‘Zhangsan should do that thing more than Lisi.’
- (40) Zhangsan bi Lisi *(geng) xunsu-di wancheng le
 Zhangsan com Lisi GENG quickly finish ASP
 renwu
 mission
 ‘Zhangsan finished the mission more quickly than Lisi.’
- (41) Zhangsan bi Lisi *(geng) shou-bu-liao laoban
 Zhangsan com Lisi GENG endure-not-PRT boss
 ‘Zhangsan is more fed up with the boss than Lisi.’

We have attempted to generalize similarities and distinctions among sentences that exemplify what a grammatical comparison predicate is. Thus, what has been touched on in terms of the comparison predicate can be formulated as follows.

- (42) The constraint on the comparison predicate of *bi*-comparatives
- (i) The comparison predicate must be gradable when the head of the predicate is a gradable adjective.
 - (ii) The comparison predicate must be gradable when the comparative is a DE-complement comparative.
 - (iii) The comparison predicate must be gradable when the head of the predicate is a verbal element immediately preceded by a deontic modal auxiliary.

- (iv) The comparison predicate must be gradable and telic when the head of the predicate is a verbal element not immediately preceded by a deontic modal auxiliary.

Note that each of gradability and telicity can be specified either in syntax or lexical level. These conditions might give rise to accounting for a wide range of *bi*-comparatives, with enlightening results for a theoretical analysis. Let us first test these conditions by considering the comparatives such as (43).

- (43) Zhangsan bi Lisi (geng) gao
 Zhangsan com Lisi GENG gao
 ‘Zhangsan is (much) taller than Lisi.’

It is clearly that *gao* ‘tall’ in (43) is gradable in essence, as *gao* ‘tall’ can be modified by the degree adverb *geng* ‘GENG’, thereby sufficing (i). (44) is ruled out by (i), as the adjective *cuo* ‘wrong’ is not gradable.

- (44) * Zhangsan de daan bi Lisi de daan cuo
 Zhangsan PRT answer com Lisi PRT answer wrong

(45) is a DE-complement comparative. Since *pao de kuai* ‘run DE fast’ can be modified by the degree adverb *geng* ‘GENG’, (45) satisfies (ii).

- (45) Zhangsan bi Lisi pao de (geng) kuai
 Zhangsan com Lisi run DE GENG fast
 ‘Zhangsan runs (much) faster than Lisi.’

It poses difficulty when the head of the predicate is composed of by a verbal element, in particular a transitive verb. Turn to the verb *chi* ‘eat’.

- (46) * Zhangsan bi Lisi chi
 Zhangsan com Lisi eat
 (47) * Zhangsan bi Lisi chi le san-wan fan
 Zhangsan com Lisi eat ASP three-CL rice
 (48) * Zhangsan bi Lisi duo chi le⁵
 Zhangsan com Lisi more eat ASP
 (49) ? Zhangsan bi Lisi duo chi san-wan fan
 Zhangsan com Lisi more eat three-CL rice
 lit.: ‘Zhangsan ate three more bowls of rice than Lisi.’
 (50) Zhangsan bi Lisi neng chi
 Zhangsan com Lisi can eat
 ‘Zhangsan can eat more than Lisi.’

⁵ This sentence is well-formed if a context is provided. For example, there existed a context where the listener knew what *Zhangsan* had already eaten.

- (51) Zhangsan bi Lisi duo chi le san-wan fan
 Zhangsan com Lisi more eat ASP three-CL rice
 ‘Zhangsan ate three more bowls of rice than Lisi.’

We have suggested that sentences such as (46), (47) or (48) are ruled out, given that the verbal predicate performed by the verb *chi* ‘eat’ should be enriched with gradability and telicity if it is not preceded by a deontic modal auxiliary. Pursuing a strictly descriptive adequacy, (49) is in lack of a means to express accomplishment of the comparison event, henceforth ill-formed. It can be fixed if syntax inserts a lexical item denoting telicity (it can be *mei(you)* ‘not’ or *le* ‘asp’). (50) is grammatical, since it maintains the requirement that the comparison predicate must be gradable when the head of the predicate is a verbal element immediately preceded by a deontic modal. Given the comparison predicate is gradable and telic, (51) is well-formed.

Before winding up this section, a puzzle should be addressed. What interests us is (52) and (53). *Iao* ‘should’ does not seem to be a deontic modal, and it can occur in two different positions.⁶

- (52) Zhangsan yao bi Lisi congming
 Zhangsan should com Lisi smart
 ‘Zhangsan should be smarter than Lisi.’
- (53) Zhangsan bi Lisi yao congming
 Zhangsan com Lisi should smart
 ‘Zhangsan should be smarter than Lisi.’

Tsai (2010) has suggested that there is a co-occurrence restriction between an epistemic adverb and an epistemic modal. Namely an epistemic adverb usually occurs with an epistemic modal. *Yiting* ‘must’, an epistemic adverb, accommodates the epistemic modal *iao* ‘should’, as shown below.

- (54) Zhangsan yiting yao bi Lisi congming
 Zhangsan must should com Lisi smart
 ‘Zhangsan should be smarter than Lisi.’
- (55) Zhangsan yiting bi Lisi yao congming
 Zhangsan must com Lisi should smart
 ‘Zhangsan should be smarter than Lisi.’

Our description receives support from Lü (1980). Lü (1980:521) points out that *iao* means ‘assume’ in a *bi*-comparative, and it can occur in two different positions without changing its interpretation. The well-formedness of (54) and (55) indicates that *iao* ‘should’ in the case can be an epistemic modal. Con-

⁶ Prof. Jo-wang Lin suggests that *yao* in this case should not be interpreted as ‘must’. We can only say for the moment that ‘should’ is the closest interpretation to *yao*.

sequently, the *bi*-comparatives with *iao* ‘should’ could be seen as exceptions to our *prima facie* proposal.

4. Conclusion

We hope to provide explicit as well as simple constraints for the *bi*-comparative. Summarizing to this point, following is our preliminary findings:

- (56) The constraint on the compared constituent of Chinese *bi*-comparatives

In a *bi*-comparative, the compared constituent and its correlate must be arguments of the comparison predicate, and both of them must have the same dimension.

- (57) The constraint on the comparison predicate of Chinese *bi*-comparatives
- (i) The comparison predicate must be gradable when the head of the predicate is a gradable adjective.
 - (ii) The comparison predicate must be gradable when the comparative is a DE-complement comparative.
 - (iii) The comparison predicate must be gradable when the head of the predicate is a verbal element immediately preceded by a deontic modal auxiliary.
 - (iv) The comparison predicate must be gradable and telic when the head of the predicate is a verbal element not immediately preceded by a deontic modal auxiliary.

To bridge the gap between traditional description and current theoretical research, we have shown that the Chinese *bi*-comparatives can be analyzed in a theoretical way. The examples we have surveyed and discussed are neither comprehensive nor exhaustive. Thus, the two constraints might be not well-established, and need modification wanting.

Reference

- Chung, Hsiu-Ju. 2006. *Syntax of the Bi Comparative Construction in Mandarin Chinese*. MA thesis, National Chung Cheng University.
- Fu, Yi-Chin. 1978. *Comparative Structures in English and Mandarin Chinese*, Doctoral dissertation. University of Michigan.
- Grano, Thomas, and Chris Kennedy. 2012. Mandarin transitive comparatives and the grammar of measurement. *Journal of East Asian Linguistics*. 21: 219-266.
- Hashimoto, Anne Y. 1971. *Mandarin Syntactic Structures*. Unicorn Chi-Lin. Princeton, N.J.: Princeton University.
- Huang, C.-T. James, Y.-H. Audrey Li, and Yafei Li 2009. *The Syntax of Chinese*. Cambridge University Press, Cambridge.
- Hsing, Jen-Chieh. 2003. *On Comparative Sentences with Bi-marker in Mandarin Chinese*, MA thesis, National Tsing Hua University.

- Kennedy, Christopher. 2005. Parameters of Comparison. MS., University of Chicago.
- Kennedy, Christopher. 2007. Modes of Comparison, *Chicago Society of Linguistics* 431: 141-165.
- Li, Charles N., and Sandra A. Thompson. 1994. On 'Middle Voice Verbs' in Mandarin. In Barbara Fox and Paul Hopper, eds., *Voice: Form and Function*, Amsterdam: John Benjamins, 231-246.
- Li, Charles N. and Sandra A. Thompson. 1981. *Mandarin Chinese: a Functional Reference Grammar*. Berkeley: University of California Press.
- Lin, Jo-Wang. 2003. Temporal reference in Mandarin Chinese. *Journal of East Asian Linguistics* 12: 259-311.
- Lin, Jo-Wang. 2006. Time in a language without tense: The case of Chinese. *Journal of Semantics* 23: 1-53.
- Lin, Jo-Wang. 2009. Chinese Comparatives and their Implicational Parameters, *Natural Language Semantics* 17:1-27.
- Lin, Tzong-Hong. 2001. *Light Verb Syntax and the Theory of Phrase Structure*, Doctoral dissertation, University of California, Irvine.
- Liu, Chen-Sheng Luther. 2011. The Chinese *bi* comparative. *Lingua* 121. 12: 1767-1795.
- Liu, Chen-Sheng Luther. 2010a. The Chinese *geng* clausal comparative. *Lingua* 120 6, 1579-1606.
- Liu, Chen-Sheng Luther. 2010b. The positive morpheme in Chinese and the adjectival structure. *Lingua* 120/4:1010-1056.
- Liu, Chen-Sheng Luther. 1996. A note on Chinese comparatives. *Studies in the Linguistic Sciences* 26 1/2, 215-235.
- Lǚ Shu-Xiang, et al. 1980. *Xiandai Hanyu Babai Ci* [Eight Hundred Words in Modern Chinese]. Shanwu Yinshuguan. Beijing.
- Lu, J.M. and Z. Ma. 1999. *Xiandai Hanyu Xuci Sanlun* [Essays on Functional Words in Modern Chinese]. Shangwu Yinshuguan, Beijing.
- Paul, Waltraud. 1993. A Non-Deletion Account of the Comparative Construction in Mandarin Chinese. *Cahiers de Linguistique Asie Orientale* 93: 9-29.
- Shi, Ding-Xu. 2001. The Nature of Chinese Comparatives, in Hai-Hua Pan ed., *Studies in Chinese Linguistics* Vol. 2: 137-158.
- Su, Cheng-Chieh. 2012. The Syntax of Bi Comparatives in Mandarin Chinese, *Taiwan Journal of Linguistics* 10.1: 1-68.
- Tsai, Wei-Tien Dylan. 1994. On Nominal Islands and LF Extraction in Chinese. *Natural Language & Linguistic Theory* 12: 121-175.
- Tsai, Wei-Tien Dylan. 2010. *Tan Hanyu Motaici qi fenbu yu quanshi de duiying guanxi* [On the corresponding relation of modal's distribution and its interpretation in Mandarin Chinese] ms. National Tsing Hua University.
- Tsao, Feng-Fu. 1990. *Sentence and Clause Structure in Chinese: A Functional Perspective*. Student Book Co., Taipei.
- Tsao, Feng-Fu. 1989. Comparison in Chinese: A Topic-Comment Approach. *Tsing Hua Journal of Chinese Studies* 18: 151-189.
- Xiang, Ming. 2005. *Some Topics in Comparative Constructions*. PhD dissertation, Michigan State University.
- Zhang, Niina. 2009. *Coordination in Syntax*. Cambridge Studies in Linguistics Series 123, Cambridge: Cambridge University Press.
- Zhu, De-Xi. 1982. *Yufa Jiangyi* [Lectures on Chinese Syntax] Beijing: Shangwu Yinshuguan.

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