國立政治大學語言學研究所碩士論文

National Chengchi University
Graduate Institute of Linguistics
Master Thesis

指導教授：何萬順 博士
Advisor：Dr. One-Soon Her

# 漢語光桿分類詞組之分析
# On the Bare Classifier Phrase in Mandarin Chinese

研究生：陳景芃 撰
Student: Ching-Perng Chen

中華民國 一〇二 年 一 月
January, 2013

# ON THE BARE CLASSIFIERS PHRASES IN MANDARIN CHINESE

BY

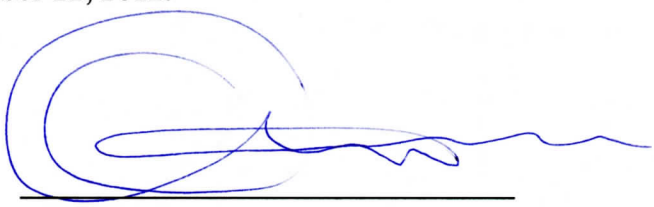
Ching-Perng Chen


A Thesis Submitted to the
Graduate Institute of Linguistics
in Partial Fulfillment of the
Requirements for the Degree of Master of Arts

January, 2013

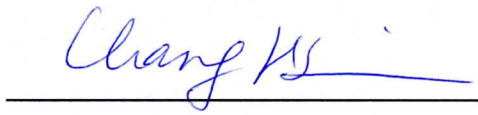
**The members of the Committee approve the thesis of Ching-Perng Chen**

**defended on October 22, 2012.**



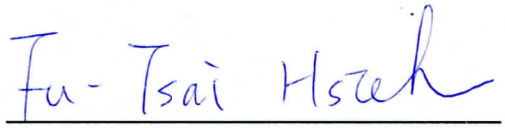
**One-Soon Her**

**Advisor**



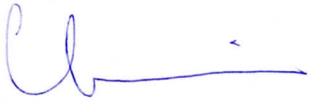
**Husn-Huei Chang**

**Committee Member**



**Fu-Tsai Hsieh**

**Committee Member**

**Approved:** 

**Kawai Chu, Director, Graduate Institute of Linguistics**

## ACKNOWLEDGEMENTS

能夠完成這份研究以及碩士學位論文，最感謝的當然是我的指導老師何萬順老師。雖然我到最後都還是無法追上老師腦中飛快的推理邏輯，卻從何老師嚴謹的科學態度學到對研究的執著。在此之前，我從來不敢相信對語言學沒什麼天份的自己可以成為班上第一個寫完論文的人。何老師不僅在學術上不厭其煩地給予指導，同時也讓我從助理工作裡學到許多，更謝謝熱情的何老師多次邀我們一群學生到家裡聚會，與我們分享生活碰到的大小事情。

在政大語言所的兩年半，真的可以說是豐收的時光。我喜歡政大語言所多元的課程設計以及自由的學風，讓我在語言學這個領域收穫不少。也喜歡語言所的所有任課師長們，傾囊相授之餘也不忘時時給學生們關懷。在此感謝所有教過我的師長們，史佳琳老師、林祐瑜老師、莫建清老師、張郇慧老師、賴惠玲老師，更不用說所上的專任老師們，私底下笑容很多的語言所所長徐老師，總是像仙女一樣舉止優雅的黃老師，大眼眨呀眨、美麗又活潑的萬老師，熱情也愛熱鬧搞笑的蕭老師，以及上課幽默、魅力四射、立領為註冊商標的何老師，不管是課堂上或課後總給我好多好多的鼓勵與支持。另外，要特別感謝助教學姐，很多時候需要麻煩她幫我在大小文件上核章，在所辦工讀的兩年半時時間，助教學姊也教了我很多行政工作上要注意的大小事。

論文的完成，除了指導教授外，感謝兩位參與的口試委員們，張郇慧老師和謝富在老師。感謝你們不吝嗇給我許多專業的指導和建議，在我露出疑惑神情時給個溫暖的微笑，不厭其煩地再講解一次。也感謝你們願意親臨政大參與我論文計畫書口試以及論文口試，學生我十分感激。

在此，我還要感謝研究生生活認識的學長姐和學弟妹，不管是所上或是外系的大家，或是和我相處最多時間的同屆同學們，和你們一起上課到包種茶節、期末聯歡、大大小小的出遊以及畢業旅行，這些全部都是我非常美好的研究生回憶。感謝吹吹和維維不時的關心和加油打氣。感謝原本是電腦工讀生後來卻參與我們好多活動的小明，在某次論文快寫完電腦卻當機時拯救了我的筆電。感謝 Tim&Linda 夫婦以及藍爸爸，擴大了我小小的生活圈，每一次和你們聊天都笑到一個不行。感謝後來和我一起搬進大公寓的 DH 花，所有開心難過的時候都可以

跟你們一起分享，不管是大哭大笑或是大鬧~ 感謝姊妹淘涵吉對生活上大小事情的協助，在我碰到難過事情或苦惱時聽我講心事。感謝瘦(ㄆㄤˋ)亨積極參與我們大小活動、分享他的特別辭彙，以及在論文的音韻分析上指導我。感謝大衛，研究生生活有了你才有意義（噁~~~），感謝你參與了我研究所生活的大部份，在論文口試前夕耐心聽我多次練習。

感謝在台北工作念書的中山外文 98 朋友們，阿莓、Momo、魚丸、悅綾、小P…，每一次和你們聚會總可以好好放鬆，分享除了語言學外的生活趣事。也感謝在高雄錦忠老師、阿白和梨盎幫我加油打氣。然後，我想跟還在台大外文所奮鬥的大貓說，好好加油！學術的路不好走，但撐過就是你的~離畢業之路不遠了。另外，謝謝我在安親班碰到的陳老師和小朋友們，對我來說，家教這份工作除了賺錢之外，更是我找到自己長處與成就感的地方。謝謝你們溫暖的笑容以及每一次的出遊邀約，在你們身上我也學到了好多。

最後，也是最重要的，感謝支持我選擇以及完成這個學位的家人們。感謝爸媽給了好多溫暖，在碰到瓶頸想要放棄的時候鼓勵我堅持下去，也感謝你們經濟上給我部分援助，讓我不致陷在無限的打工循環裡。感謝妹在臉書上時不時跟我分享生活大小事情。感謝在台北對我照顧無微不至，幾乎每週末都讓我去打擾的二姨和四姨。感謝四伯父伯母、大姑姑、表姊和外甥女采采，在我無法回高雄的大節日找我去你們天母的家叨擾，共享天倫之樂。感謝現在在天堂的愛犬波卡，好多時候你是讓我想回高雄的動力，相信你現在過得很好。

即將完成論文之際，心中可說是百感交集。開心快要可以拿到一個學位，卻又對無憂無慮的學生生活充滿不捨。畢業之後馬上要踏入人生的新階段了，對未知的未來既興奮又帶了點不安的感覺。但在此之前，容我對這一路上碰到的大家說聲：真的好感謝你們！！！

景芃

於論文完成前夕

# VITA

**EDUCATION**

M.A. in Linguistics, December 2012
National Chengchi University

B.A. in English, June. 2010
National Sun Yat-sen University

**GRANTS and SCHOLARSGIPS**

Oct. 2012 — National Science Council Travel Grant for attending 45th International Conference on Sino-Tibetan Languages and Linguistics. Project No. NSC-101-2922-I-004-065

Aug. 2012-Jan. 2013 — Research Assistant of **NSC Research Project:** Numerals and Classifiers: A Typological Study of Word Orders and Structures in the World's Languages

Sep. 2011-June 2012 — Teaching Assistant of Language and World Civilization
National Chengchi University

Aug. 2011-July 2012 — Research Assistant of **NSC Research Project:** Classifiers in Taiwan Mandarin: Bibliography, Corpus, and LFG Analysis

Sep. 2010-June 2011 — Syntax Laboratory Assistantship
National Chengchi University

**PUBLICATION**

Chen, Ching-Perng. 2012. On the Bare Classifier Phrases in Mandarin Chinese. Paper presented in 45th International Conference on Sino-Tibetan Languages and Linguistics. Nanyang Technological University. Singapore.

國 立 政 治 大 學 研 究 所 碩 士 論 文 題 要

研究所別：語言學研究所

論文名稱：On the Bare Classifier Phrase in Mandarin Chinese
漢語光桿分類詞組之分析

指導教授：何萬順 博士

研究生：陳景芃

論文內容提要：（共一冊，21,967 字，分五章節）

本篇論文分析光桿分類詞組[CL+N]在漢語的分佈位置。過去文獻中，學者們認為光桿分類詞組[CL+N]為不定數量詞組[*yi*+CL+N]的音韻弱化（Lu 1990, Chen 2004），且因為出現在主詞或主題的光桿分類詞組數量詞組[*yi*+CL+N]並不是不定語意，不定數量詞組音韻弱化的光桿分類詞組[CL+N]不得出現在這兩個位置 (Cheng & Sybesma 1999/2005, Li 1998, Huang, Li & Li 2009)。在此前提下，可以得到兩個假設，第一，所有的不定數量詞組[*yi*+CL+N]都能弱化為光桿分類詞組[CL+N]。第二，所有的光桿分類詞組[CL+N]都只能在不定語意的位置出現。然而，在漢語裡，即使指涉數量的數量詞組[*yi*+CL+N]還是能弱化為光桿分類詞組[CL+N]，且並非所有的光桿分類詞組[CL+N]都出現在不定語意的位置。換句話說，過去文獻只能解釋而非預測光桿分類詞組[CL+N]在漢語中的分佈位置。

進一步檢視漢語裡光桿分類詞組[CL+N]的分佈位置，我認為指涉數量的數量詞組[*yi*+CL+N] 除了在比較語境，大多時候也能弱化為光桿分類詞組[CL+N]。另外，由於漢語裡的分類詞有許多附著語素的特徵，我認為應該將其分析為附著語素較為適當。從構詞的角度來看，漢語裡的分類詞需附著於前方的成分，不能單獨出現。句法上來說，漢語分類詞可以自由黏著在某幾詞類的宿主。音韻上，漢語的分類詞以最大音韻重量限制所選宿主。綜合以上幾點，我主張，限定或非限定的句法位置並非決定漢語光桿分類詞組[CL+N]出現的主要原因；決定漢語光桿分類詞組[CL+N]的出現因素應是分類詞是否能找到適當的宿主附著。有關合法宿主的制約條件，在我的論文裡也有詳細的討論。

**Abstract**

This thesis investigates the distribution of the bare classifier phrase [CL+N] in Mandarin Chinese. Previous studies argue that [CL+N] is the phonological reduction of the indefinite numeral classifier phrase [*yi*+CL+N] (Lu 1990, Chen 2004), and it cannot occur in subject or topic position because [*yi*+CL+N] in these positions are never considered indefinite (Cheng & Sybesma 1999/2005, Li 1998, Huang, Li & Li 2009). Two predictions are made from these analyses. First, all indefinite [*yi*+CL+N] can be reduced to [CL+N], and second, [CL+N] only occurs in positions which are considered indefinite. However, it is easily found in Mandarin Chinese that numeral classifier phrase denoting quantity can also be reduced to bare classifier phrase [CL+N], and that not all [CL+N] occur in indefinite positions. In other words, previous studies simply explain the occurrence of [CL+N], but fail to predict the occurrence of [CL+N].

With a close examination, I suggest that numeral classifier phrase [*yi*+CL+N] denoting quantity can also be reduced to bare classifier phrase [CL+N] except occurring in contrastive contexts. Also, I adopt the clitic account on classifiers in Mandarin since they share many properties with clitics. Morphologically, classifiers in Mandarin never appear in isolation but attach to preceding elements. Syntactically, they are free to cliticize to hosts belonging to different categories but are not subject to syntactic roles. Phonologically, classifiers in Mandarin subcategorize their hosts within a maximal number of moras. Therefore, I argue that it is not (in)definiteness that decides the occurrence of the bare classifier [CL+N] but whether it can find a legal host to cliticize. Constraints concerning to the legal hosts will also be discuss in detail in my thesis.

# List of Abbreviations:

The following abbreviations are used in the glosses.

ASP = aspect marker

BA = *ba*-construction

CL = classifier

DE = Structural particle in Mandarin

EXP = Experiential aspect marker

M = measure word

N = noun

Num = numeral

P = preposition

PAR= particle

V = verb

**TABLE OF CONTENTS**

# Chapter 1

## Introduction

Categorization is considered one of the most prominent aspects of human cognition. Jakendoff (1983) has stated that to judge whether a particular thing belongs to a particular category is an essential aspect of cognition. The importance of categorization is also given by Lakoff (1987) that the understanding of how people categorize is prior to any understanding of how people think and how people function. Studies have also proved that the way an entity is categorized depend on how it is conventionally perceived (Adams, 1986; Tai and Chao, 1994).

Language encodes representations of categorizing sets and individuals. In languages like English and other Indo-European languages, words are used directly with numerals or with various determiners. On the other hand, many languages, for example, Chinese, Japanese, Malay and Thai, use classifiers to signal the references. Being one of the classifier languages, the classifier system in Chinese remains a hot linguistics topic since Chinese is extremely rich in the use of classifiers. In recent decades, research related to classifiers is predominantly on cognitive approaches or

semantic approaches. While cognitive approaches and semantic approaches compose the majority of the data, analyses on syntactic aspect are still investigated by many syntacticians.

Different syntactic analyses on classifier in Mandarin Chinese have been proposed. The major three issues are devoted to defining classifiers, finding out whether classifier form a constituent with Num or N first, and interactions between numeral classifier phrases [Num+CL+N] and bare classifier phrases [CL+N] (e.g., Li and Thompson 1981, Huang 1982, Tang 1990, Li 1998, Cheng and Sybesma 1999, 2005, Chen 2004, Huang 1982, Li and Li 2009, Her 2010). My thesis concerns more to the interaction between numeral classifier phrases [Num+CL+N] and bare classifier phrases [CL+N].



**1.1 Motivation and Purpose**

Numeral classifier phrases [Num+CL+N] in Mandarin Chinese, according to most studies, have generally been regarded as indefinite expressions, and they are not allowed to occur in subject or topic positions because these positions are considered definite (e.g., Chao 1968, Li and Thompson 1981, Li 1996, Tsai 1994a, 1996). But some hold the different opinion that the prohibition of [Num+CL+N] in some positions is due to its quantity-denoting expression (Li 1998, Huang, Li and Li 2009).

While many studies discuss the distributions of [Num+CL+N], some studies also discuss a related structure, the bare classifier phrase [CL+N] (Chen 2003, 2004, Cheng and Sybesma 1999, 2005, Yang 2002, Her 2010). Since the two structures have a lot of overlapping distributions (for example, postverbal positions), some works claim that [*yi*+CL+N] and [CL+N] belong to distinct structures because the only interpretation of [CL+N] is indefinite and nonspecific (Cheng and Sybesma 1999); yet more studies suggest that bare classifier phrases [CL+N] are the phonological reduction of numeral classifier phrases [Num+CL+N] when the numeral is *yi* 'one' (Lu 1990, Chen 2003, 2004, Her 2010).

Discrepancies are also discussed concerning the distribution of bare classifier phrases [CL+N]. Compared with [Num+CL+N], the occurrences of [CL+N] are more limited. Various explanations are provided for the prohibition of [CL+N] in certain contexts. Cheng and Sybesma (1999), who hold the opinion that [CL+N] and [*yi*+CL+N] being two different structures, state that the prohibition of [CL+N] is concerning boundedness and indefiniteness. Lu (1990) and Chen (2004) argue that only when [*yi*+CL+N] occur in indefinite position, being specific or nonspecific, can [*yi*+CL+N] be reduced to [CL+N]. Since it has been proved that [CL+N] do occur in indefinite and nonspecific positions, in this thesis, I adopt Lu (1990) and Chen's (2004) account that the bare classifier phrase [CL+N] is the phonological suppressed

form of [*yi*+CL+N].

Two assumptions are made under Lu (1990) and Chen's (2004) account. First, classifier phrases [CL+N] never occur in definite positions such as subject and topic positions. Second, all indefinite [*yi*+CL+N] can be reduced to [CL+N]. So far the first assumption has proven to be correct, but counterexamples for the second assumption are easily found in Mandarin Chinese. *Yi* 'one' in [*yi*+CL+N] cannot be omitted in some indefinite positions. Also, some [*yi*+CL+N] which are not interpreted as indefinite also undergo *yi* omission and become [CL+N]. All these facts indicate that the previous accounts simply explain the occurrences of [CL+N] in some contexts yet fail to "predict" the occurrences of [CL+N].

The above counterexamples bring up the question: are there any other reasons that might decide the occurrences of [CL+N] instead of indefiniteness? Yang (2002) suggests a rather different viewpoint in a chapter of his dissertation that the classifiers in Mandarin Chinese are actually clitics. He posits a morpho-syntactic structure for a Mandarin Chinese full NP with a classifier, where the combination of the numeral and the classifier is assumed to be a morphological complex rather than two independent words. In Yang's (2002) study, he uses Zwicky and Pullum's (1983) six criteria of distinguishing affixes and clitics to examine the classifier in Mandarin Chinese by comparing to clitics in English. In addition to Yang's (2002) study, I have also

observed that classifiers in Mandarin share many properties with clitics syntactically, phonologically, and morphologically, and these properties seem to provide a better solution for the prohibition of [CL+N] in certain contexts.

Therefore, in my thesis, first I am going to argue that the bare classifier phrase [CL+N], as a phonological reduction of [*yi*+CL+N], not only occurs in indefinite positions but also in quantity-denoting positions. Second, I will adopt a clitic account for classifiers in [CL+N] in Mandarin Chinese and argue that the prohibition of [CL+N] is due to the lack of a legal host but not indefiniteness.

**1.2 Conventions of the Data**

The data presented in my thesis is based on Taiwan Mandarin, a dialect of Mandarin Chinese. The reason that I narrow the data down to Taiwan Mandarin is to minimize the grammaticality issue. Examples provided are from both on-line corpus, the Academia Sinica Balanced Corpus of Mandarin Chinese, google searches and the utterances of Taiwan Mandarin native speakers.

Note that the bare classifier structure [CL+N] discussed in this thesis does not include the verbal classifier such as *he ge shui* ‘to drink water’ or *guang ge jie* ‘to go shopping’. There are several differences between the verbal usage of classifiers and the nominal usages of classifiers. First, the nominal *ge* is necessarily inserted between

a quantifier and certain classes of count nouns, while the absence of the verbal *ge* does not cause ungrammaticality. Second, unlike the nominal *ge*, the verbal *ge* usually does not follow numerals and demonstratives. Third, the verbal *ge* can occur before noun phrases that are typically non-classifiable. For example, in *he ge shui* 'to drink water', *ge* is not the classifier for water. The three reasons above show that the verbal classifier construction [VP+*ge*+N] differs from the construction given in this thesis.

In addition, the "classifier phrase" used in this thesis includes both classifiers and measure words defined by Her (2010). In other words, the classifier phrases in my thesis have a broad meaning. The reason for counting measure words such as *jin* 'Taiwanese kilogram', *bao* 'pack' into the classifier phrase category is that Chinese classifiers and measure words behave similarly in syntax yet differ in semantics and mathematical value (Her 2010). The major two semantic differences lie in adjectival modification and mathematical value (Her 2010). However, since adjectival modifiers are not allowed in bare classifier phrases in Mandarin, semantic difference will not be the focus I am going to discuss in the following section. Therefore, in my thesis, both true classifiers and measure words in Mandarin Chinese will count as "classifier phrases" used in my examples.

### 1.3 Organization of the Thesis

After the motivation and the purposes of my thesis are introduced, chapter two will recapitulate some main points of explanations about the occurrences of two classifier constructions, [Num+CL+N] and [CL+N], in previous studies. Later, in chapter three, distributions of [*yi*+CL+N] and [CL+N] will be presented, and some counterexamples against traditional analyses will be given to suggest modifications on previous studies. In chapter four, properties of clitics are first introduced, then a detailed analysis on supporting classifiers in Mandarin being clitics will be proposed. Finally, chapter V concludes the study by summarizing the main points of the thesis and pointing out the implications for future study.

國立政治大學
National Chengchi University

# Chapter 2

## Literature Review

It is well known that Chinese languages allow both nominals appearing with classifiers and nominals appearing without classifiers to occur as arguments. It is believed in earlier studies that in Mandarin Chinese a classifier must cooccur with an overt numeral or a demonstrative (see, e.g., Li and Thompson 1981:104, Tang 1990). But in recent years, contrary to what is generally assumed, this statement is proven to be incorrect. The following example shows that in Mandarin Chinese, a classifier is allowed to appear without the occurrence of a numeral or a demonstrative.

(1) 我 買 了 本 書
*wo mai le ben shu*
I buy ASP CL book
'I bought a book.'

A classifier appearing with a numeral is referred to as a numeral classifier phrase [Num+CL+N], and the one without a numerals or a demonstrative is referred to as a bare classifier phrase [CL+N]. Since both structures have many overlapping distributions, bare classifier phrases [CL+N] are generally considered to be the

omitted form of [Num+CL+N] when the numeral is *1*.

While most studies agree that numeral classifier phrases [Num+CL+N] have at least two interpretations (Tsai 1994a, 1996 and Li 1996, Huang, Li and Li 2009), issues on the interpretation and the distribution of bare classifier phrases [CL+N] have long been controversial because the occurrences of [CL+N] are more limited. Some claim that bare classifier phrases [CL+N] are always interpreted as nonspecific indefinite (Cheng and Sybesma 1999), others state that [CL+N] can occur in indefinite specific positions (Lu 1990, Chen 2004). Explanations for the occurrences of [CL+N] also vary among proposed studies, yet a consensus has been reached that [CL+N] never occurs in subject and topic position (Cheng and Sybesma 1999, Chen 2004, Yang 2002).

In this chapter, several issues will be concerned. First, in 2.1, related to the interpretation of [Num+CL+N] and [CL+N], the concept of definiteness and specificity will be introduced. Then in 2.2, I will review some studies concerning the interpretation and the distributions of the numeral classifier phrases [Num+CL+N]. Later in 2.3, some studies with respect to the issue on whether [CL+N] being a suppressed form of [*yi*+CL+N] or a totally different structure from [*yi*+CL+N] will be captured. Also, I will deal with some works on discussing the interpretation of the bare classifier phrase [CL+N] and its interactions with the general constraint in

Mandarin Chinese that disallows the occurrence of [CL+N] in subject or topic positions. 2.4 will introduce two different viewpoints proposed by Ji (2007) and Yang (2002). Ji (2007) argues against Cheng and Sybesma (1999) that the prohibition of [CL+N] in certain positions is due to phonological factor but not definiteness. Yang (2002), rather than treating classifiers as phrases, thinks that classifiers in Mandarin Chinese behave more like clitics. Finally, few remarks about this section will be presented in 2.5.

## 2.1 Definiteness and Specificity

Definiteness and specificity are two important concepts when discussing the syntax and semantics of nominal expressions. In this section, I will first briefly introduce the definitions and some assumptions under these two concepts.

### 2.1.1 Lyons (1999)

Lyons (1999) claims that definiteness is universal. In any language, the referents of some nominal are identifiable to the hearer, no matter there is any grammatical device to indicate the definiteness of the nominal or not. Though universal, definiteness still varies syntactically among languages and it may not be encoded in some languages (Lyons 1999). In English, definiteness and indefiniteness are marked

by articles and other determiners. It is easy to determine whether a nominal expression is definite or indefinite in English, as definiteness is always encoded by definite determiners. However, in a language like Chinese, definiteness of the nominal usually is not encoded syntactically; the definite interpretation of the nominal expression usually depends on pragmatic factors such as shared background knowledge or prior discourse (Lyons 1999).

Lyons (1999) also classifies definites into simple and complex ones. Simple definites are definiteness signaled by grammatical or functional morphemes (e.g., *the* in English). Complex definites are proper names, personal pronouns, noun phrases with possessives or demonstratives. In Chinese, there is no grammatical marker to mark definiteness, but it is also encoded by proper names, personal pronouns and demonstratives.



### 2.1.2 Frawley (1992)

A close concept to definiteness is specificity. Frawley (1992) defines specificity as a concept which "refers to the uniqueness, individuation, or referential accessibility of an entity in a mentally projected world." Unlike definiteness, a nominal can be both specific and non-specific in the same syntactic position, as the below example shows.

(2) I'm looking for a man who speaks Mandarin.

In (2), there are two readings. It can mean that (i) the speaker is finding a particular man who speaks Mandarin, or (ii) the speaker is finding anyone who speaks Mandarin. Also, noted by Frawley (1992: 74), specificity "can be functionally induced by tense, mood, definiteness, context of utterance or assumed knowledge base." For example, in English, the past tense usually induces a specific reading of the nominal and the habitual present tense a nonspecific reading. He states that this is due to actuality that past tense denotes what really happened in the past.

(3) a. John bought the book.

b. John buys the book.

While the object in (3a) refers to a specific book, the object in (3b) does not have to refer to a specific book. It can either mean John habitually buys certain books, or it can also refer to any book.

Definiteness and specificity are closely related. Definite nominals tend to be specific, as they tend to encode old information (Frawley 1992). Still, not all definite descriptions are specific; similarly, not all indefinite descriptions are nonspecific. The judgment of a nominal being definite or specific is depending on the contextual factors.

## 2.2 The interpretation and the distribution of the numeral classifier phrase [Num+CL+N]

Numeral classifier phrases [Num+CL+N] have generally been regarded as indefinite expressions and are not allowed to appear in subject or topic position in Mandarin Chinese (Chao 1968, Li and Thompson 1981, Tsai 1994, 1996).

(4) a. ?? 三　個　小孩　吃了　冰淇淋
*san ge xiaohai chi-le bingqilin*
three CL kid eat ASP ice cream
'Three kids ate the ice cream.'

b. ?? 三　個　小孩　很　可愛
*san ge xiaohai hen keai*
three CL kid very cute
'Three kids are cute.'

(5) a. ?? 三　個　小孩，我　以爲 吃了　冰淇淋
*san ge xiaohai wo yiwei chi-le bingqilin*
three CL kid I think eat ASP ice cream
'Three kids , I thought (they) ate the ice cream.'

b. ?? 三　個　小孩，我 以爲　很　可愛
*san ge xiaohai wo yiwei hen keai*
three CL kid I think very cute
'Three kids, I thought they are smart.'

These ungrammatical sentences are saved by adding the existential marker *you* 'have, exist' before the numeral classifier phrase.

(6) a. 有　三　個　小孩　吃了　冰淇淋
*you san ge xiaohai chi-le bingqilin*
have three CL kid eat ASP ice cream
'There were three kids who ate the ice cream.'

b. 有　三　個　小孩　很　可愛
you *san ge xiaohai hen keai*
have three CL kid very cute
'There are three kids who are cute.'

(7) a. 有　三　個　小孩，我 以爲 吃了　冰淇淋
*you san ge xiaohai wo yiwei chi-le bingqilin*
have three CL kid I think eat ASP ice cream
'There are three kids whoI thought (they) ate the ice cream.'

b. 有　三　個　小孩，我 以爲　很　可愛
you *san ge xiaohai wo yiwei hen keai*
have three CL kid I think very cute
'There are three kids who I think (they) are cute.'

However, there are many counterexamples to this generalization. [Num+CL+N] are also found to occur in subject and topic positions (e.g., Tsai 1994a, 1996 and Li 1996). Examples below show that [Num+CL+N] can appear in subject and topic positions.

(8) 一　張　床　擠了　五　個　人
*yi zhang chuang ji-le wu ge ren*
one CL bed squeeze ASP five CL person
'One beds were crowded with five people.

(9) 三　個　保母　就　照顧　他 一 個 小孩？
*san ge baomu JIU zhaogu ta yi ge xiaohai*
three CL babysitter only care he one CL child
'Three babysitters took care of him, only one child?'

(10) 一 個老師 就 把 那 群 壞孩子 控制住 了
*yi ge laoshi jiu ba na qun huaixiaohai kongzhizhu le*
one CL teacher JIU BA that group bad kids control-hold PAR
'One teacher have controlled that group of bad kids.'

(11) 三 張 衛生紙 夠 你 擦 屁股 嗎
*san zhang weishengzhi guo ni ca pigu ma*
three CL tissue paper enough you wipe butt Q
'Are three pieces tissue enough for you to wipe after bm?'

Two aspects explaining the occurrence of [Num+CL+N] are related to definiteness and the quantity-denoting expression. These two aspects will be introduced in 2.2.1 and 2.2.2.

**2.2.1 Li (1998) and Huang, Li and Li (2009)**

Li (1998) argues that there are two types of numeral classifier phrases [Num+CL+N] which exhibit different syntactic behaviors. Those [Num+CL+N] that do not occur at sentence initial are indeed indefinite; yet for those occur at sentence initial, Li (1998) provides further explanations that [Num+CL+N] in these sentences are actually quantity-denoting expressions, not indefinite expressions. She argues that the verb like *gou* 'enough/sufficient' in (11) denotes the sufficiency of a certain amount. The verb *kongzhizhu* 'to control over' in (10) expresses the amount of children being controlled over. The different structural representations are supported from the evidence related to pronominal binding and scope interaction.

Li (1998) argues that a quantity-denoting expression [Num+CL+N] never corefers with a pronoun, nor can it serve as an antecedent of a bound pronoun like *ta* 'he' or *tamen* 'they.' Compare the indefinite expression in (12a) and (13a) with the quantity denoting expression (12b) and (13b).

(12) a. *三 個 人 抬不動 這 架 鋼琴。 他們 的 (Li 19a)
*san ge ren$_i$ taibudong zhe jia gangqi. tamen$_i$ de*
three CL people lift-not-move this CL piano their DE
*力量 太 小*
*liliang tai xiao* (Quantity-denoting)
strength too small.
'Three people cannot lift up this piano. Their strength is too weak.'

b. 他 明天 會 看到 三 個 人 會 跟 他們 (Li 19b)
*ta mingtian hui kandao san ge ren$_i$, hui gen tamen$_i$*
he tomorrow will see three CL people will with them
做 朋友
*zuo pengyou* (Indefinite expression)
make friends
'He will meet three people tomorrow and will make friends with them.'

(13) a. *三 個 人 吃不完 你 給 他們 的 五 碗 飯 (Li 20a)
*san ge ren$_i$ chi-bu-wan ni gei tamen$_i$ de wu wan fan*
three CL men eat-not-finish you give them DE five bowl rice
'Three men cannot finish five bowls of rice you gave to them.'

b. 有 三 個 人 吃不完 你 給 他們 的 五 碗 飯 (Li 20b)
*you san ge ren$_i$ chi-bu-wan ni gei tamen$_i$ de wu wan fan*
have three CL men eat-not-finish you give them DE five bowl rice
'There are three men unable to finish five bowls of rice you gave to them.'

Quantity-denoting expressions not only behave differently from indefinite ones with respect to pronominal coreferences but also with respect to scope interaction. A

quantity-denoting expression does not have scope interaction. For example, there is only one reading in (14) that the amount of soup consumed by the three people in five bowls:

(14) 三 個 人 喝得完　　五 碗　湯
*san ge ren he-de-wan*　　*wo wan*　*tang*
three CL person drink-de-finish five bowl soup
'Three people can finish three bowls of soup.'

But indefinite [Num+CL+N] can have scope interaction. See the example below.

(15) 我　讓 三　個　人　喝完　　五 碗　湯
*wo rang san*　*ge*　*ren*　*he-wan*　　*wo wan*　*tang*
I　let　three CL person drink-finish five bowl soup
'I let three people eat five bowls of soup.'

Li (1998) also points out that the indefinite expression, but not the quantity-denoting expression, can co-occur with *dou* 'all', which refers to an entire set of individuals to derive a universal expression, and *you* 'exist, have', which asserts the existence of individuals (an existential expression).

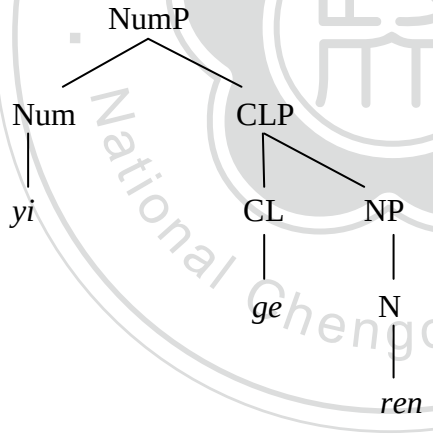
(16) 三　個 學生　　都　來　這兒 了
*san*　*ge xuesheng dou*　*lai*　*zher*　*le*　　(Li 14)
three CL student　　all　come here PAR
'Three students all came here.'

(17) 有　三　個　　學生　來　這兒　了
*you*　*san*　*ge*　*xuesheng lai*　*zher*　*le*　(Li 15)
have three　CL student　come　here PAR
'There are three students that came here.'

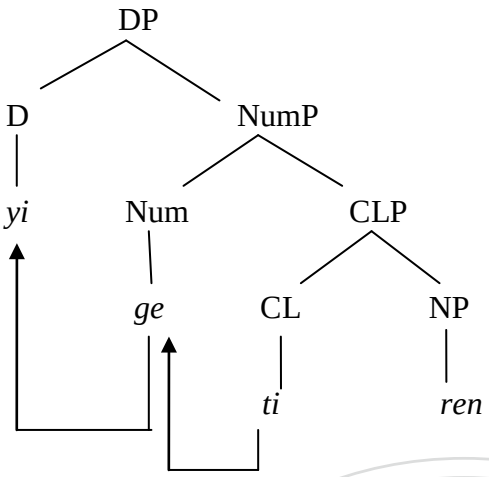
Because the two types of [Num+CL+N] exhibit different syntactic behaviors, Li (1998) claims that the quantity-denoting expression has a Num as its head, and the Num projects a NumP. An indefinite [Num+CL+N], on the other hand, has a null D head and the D head projects a DP.

Huang, Li and Li (2009) support Li's (1998) work state that the two structures capture the nature of syntax. If there is no D in its structure, [Num+CL+N] can only be interpreted as quantity-denoting since the D of a DP is generally the locus of reference. The two structures for *yi ge ren* 'one person' are presented below.

(18) a. structure for a quantity-denoting *yi ge ren*



b. structure for an indefinite *yi ge ren*




When *yi ge ren* is interpreted as quantity-denoting, there is no need to specify the indefiniteness of the whole phrase, thus it has the structure as shown in (18a). But when *yi ge ren* is interpreted as indefinite, the classifier *ge* will move to Num head, and *yi* to D head to receive an indefinite feature.

Since there are two possible structures for [Num+CL+N], in order to make sure only one interpretation is possible, being it indefinite or quantity-denoting, there must be a governor which properly governs the null D head( Huang, Li and Li 2009). For subject and topic positions, because no lexical item is available to govern them, it is always impossible for a [Num+CL+N] to occur. To be more specific, according to Huang, Li and Li (2009), an indefinite [Num+CL+N] can never be in positions like subject or topic because these positions are too high to have a governor which can lexically govern the null D head.

### 2.2.2 Cheng and Sybesma (1999)

While Li (1998) and Huang, Li and Li (2009) suggest a DP analysis for the prohibition of indefinite [Num+CL+N] in subject and topic positions, Cheng & Sybesma (1999) argue that the prohibition of indefinite [Num+CL+N] in subject or topic positions is because the only interpretation of [Num+CL+N] in these positions is definite. For instance,

(19) a. 那 三 個 學生 來 了 (Cheng and Sybesma 1999: 57)
*na san ge xuesheng lai le*
that three CL student come PAR
'Those three students came.'

b. 三 個 學生 都 來 了
*san ge xuesheng dou lai le*
three CL student DOU come PAR
'All three students came.'

Cheng and Sybesma (1999) claim that the only way for [Num+CL+N] to appear in sentence initial is by adding a demonstrative *zhe* 'this' or *na* 'that', since demonstrative marks the definiteness of the whole phrase, or by using the universal quantifier *dou* 'all', which makes the sentence interpreted as 'for all *x*, *x* is a member of three students, *x* came'. "All three students" in (19b) must refer to all the members of a certain group, thus [Num+CL+N] gets the definite interpretation here.

### 2.3 The interpretation and the distribution of the bare classifier phrase [CL+N]

As mentioned earlier, in Mandarin, a classifier does not always occur with a numeral preceding it. Phrases with such form are called bare classifier phrases. While most agree that [CL+N] is the phonological reduction of [*yi*+CL+N] (Lu 1990, Chen 2004), some hold the opinion that they belong to different structures (Cheng and Sybesma1999). Different interpretations they proposed, most works agree that bare classifier phrases [CL+N], similar to numeral classifier phrases [Num+CL+N], usually do not occur in definite positions.

#### 2.3.1 Lu (1990) and Chen (2004)

There is a special use of the indefinite determiner in Chinese that has not been reported for indefinite articles or the numeral 'one' in other languages. It was first observed in Lu (1990 [1944], 1990 [1948]) that '*yi*+classifier' can be used, normally with *yi* omitted, denoting a definite reference. Consider the following examples from Lu (1990[1944] : 164). In both examples, '*yi*+classifier' introduce a definite referent.

(20) 只 這 一 句 ， 把 (一) 個 江 平 唬 了 一 跳
*zhi zhe yi ju, ba yi ge Jiang Ping hu le yi tiao*
only this one utterance BA one CL Jiang Ping scare PFV one jump
'Just this one utterance gave Jiang Ping a fright.'

(21) 他 被 朋友 把 (一) 個 太太 給 騙走 了
*ta bei pengyou ba yi ge taitai gei pianzou le*
he BEI friend BA one CL wife GEI cheat-away PRA
'he was cheated by his friend out of his wife' or
'He suffered from his friend cheating his wife away from him.'

However, Lu (1990) points out that this usage is different from the following indefinite expression.

(22) 有 (一) 個 江 平 想要 見 你
*you yi ge Jiang Ping xiangyao jian ni.*
have one CL Jiang Ping think-want see you
'There is a certain Jiang Ping who wants to see you.'

It is also observed by Lu (1990) that, besides prosodic constraints, *yi* is more likely to be omitted when used as a marker of nonidentifiable nonspecific reference. But it can also be omitted in a nonidentifiable specific position.

(23) 這 件 事， 昨天 我 請 了 (一) 個 人 來
*zhe jian shi zuotian wo qing le yi ge ren lai*
this CL matter yesterday I invite ASP one CL person come
'For this issue, I invited a person yesterday. '

Chen (2004) adopts Lu's (1990) analysis that [CL+N] is the omitted form of [*yi*+CL+N], and further points out under what condition can [*yi*+CL+N] omit *yi*. He argues that only when [*yi*+CL+N] is interpreted as indefinite instead of quantity-denoting can *yi* be omitted. Chen (2004) also provides a piece of phonological evidence to support Lu's (1990) argument. When [*yi*+CL+N] has a

numeral reading, *yi* is always stressed and thus cannot be omitted; while when it has an indefinite reading, it is unstressed and commonly omitted.

Chen (2004) proposes a more inclusive and revealing account by agreeing with Heine's (1997) grammaticalization processes. Heine (1997) argues that the more stages an item has gone through from numeral to indefinite article, the more it is affected by grammaticalization processes such as bleaching, cliticization, and phonetic erosion. Chen (2004) states that the more grammaticalized *yi* is, the more weakened is the morphological and phonological weight of *yi* in [*yi*+CL+N]. To be more specific, the extent of the phonological reduction of the Chinese numeral *yi* correlates perfectly with the order of its development through the five stages along the continuum of grammaticalization.

**2.3.2Cheng and Sybesma (1999)**

Cheng and Sybesma (1999) also discuss the relationship between [*yi*+CL+N] and [CL+N]. Unlike many believe that [CL+N] is the phonological reduction of [*yi*+CL+N], they claim that these two structures are totally different structures for some reasons. The first reason is related to the bounded predicate. Sybesma (1992) argues that with predicates that are bounded for reasons independent of the object, a strong reading is forced upon the object: a bare noun is interpreted as definite, an

indefinite NP as specific. For instance,

(24) a. 我 吃完 了 一 塊 餅乾 (Cheng and Sybesma 1999: 29, 30)
*wo chiwan le yi kuai binggan*
I eat-finish ASP one CL cookie
'I finished a cookie.'

b. *我 吃完 了 塊 餅乾
*wo chiwan le kuai binggan*
I eat-finish ASP CL cookie
'I finished a cookie.'

They claim that in above example, [*yi*+CL+N] must be interpreted as specific, thus the indefinite and nonspecific [CL+N] cannot appear in this position. The other bounded object position they point out is the predicate following *ba*. They argue that *BA* construction provides a similar context of boundedness, so [CL+N] cannot occur here.

(25) a. 我 把 一 碗 湯 喝完 了 (Cheng and Sybesma 1999: 31)
*wo ba yi wan tang hewan le*
I BA one CLs oup drink-finish PAR
'I finished a (particular) bowl of soup.'

*b.* * 我 把 碗 湯 喝完 了
*wo ba wan tang hewan le*
I BA CL soup drink-finish PAR
'I finished a (particular) bowl of soup.'

The second reason is related to the secondary predication. Huang (1987) argues that object NP in positions like the subject of the secondary object must be indefinite

but specific. Therefore, [CL+N] cannot occur here, either.

(26) a. 我 教 過 一 個 學生 很 聰明
*wo jiao guo yi ge xuesheng hen congming*
I teach EXP one CL student very intelligent
'I once taught a student who was very intelligent.'

b. *我 教 過 個 學生 很 聰明
*wo jiao guo ge xuesheng hen congming*
I teach EXP CL student very intelligent
'I once taught a student who was very intelligent.'

According to the evidence provided by Cheng and Sybesma (1999), [CL+N] phrases cannot simply be considered as the reduced form of [*yi*+CL+N] phrases. In addition, they have found that [CL+N] in Mandarin only occurs postverbally but not preverbally or at sentence initial, as shown in (27).

(27) a. 我 想 看 本 書
*wo xiang kan ben shu*
I want read CL book
'I want to read a book.'

b.*隻 狗 嚇到 他
*zhe guo xiadao ta*
CL dog scare he
'A dog scared him.'

Compared with Mandarin, Cheng & Sybesma (1999) have found that the bare classifier phrase [CL+N] in Cantonese can appear at sentence initial, denoting a definite expression, yet it can also appear postverbally, indicating both a definite and

an indefinite expression.

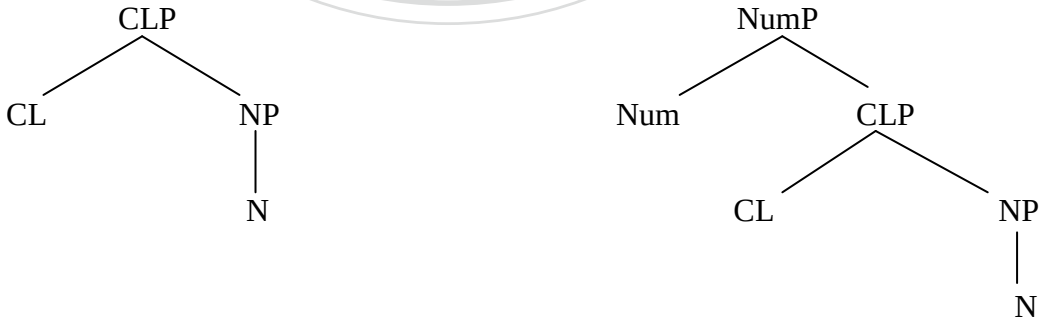
(28) a. *zek gau zungji sek juk* (Cantonese)
CL dog like eat meat
'The dog likes to eat meat.'

b. *ngo zungji tong zek gau waan*
I like with CL dog play
'I like to play with the dog.'

c. *keoi seung maai gaa ce*
he want buy CL car
'He wants to buy a car.'

A brief summary about the differences between the bare classifier phrase in Mandarin and in Cantonese is made: in Mandarin, [CL+N] is always interpreted as indefinite while in Cantonese [CL+N] can be definite or indefinite. Cheng and Sybesma (1999) also propose different structures, a CLP for the definite [CL+N], and a NumP for the indefinite [CL+N], as presented in (29)

(29) a. CLP for the definite [CL+N] b. NumP for the indefinite [CL+N]




They further provide a constraint explaining why [CL+N] cannot be interpreted as definite in Mandarin. Cheng and Sybesma (1999) claim that in Mandarin Chinese,

overt classifiers are always accompanied by a numeral, and the numeral can be overt or nonovert. In other words, in Mandarin, whenever there is an overt classifier, it must occur in the structure in (29b). Cantonese, however, lacks such a constraint on the occurrence of overt classifiers. In Cantonese, the occurrence of a classifier does not automatically imply the presence of a numeral. Thus, Cantonese nouns involving a classifier are not necessarily indefinite. This explains why [CL+N] phrases in Mandarin cannot be interpreted as definite. Since subject position and the bounded predicate in Mandarin Chinese are forced to be interpreted as definite, it is impossible for [CL+N] to occur in these positions.

To sum up, Cheng and Sybesma (1999) argue that the different syntactic behaviors of [CL+N] in Mandarin Chinese and in Cantonese are due to the feature [±definite]. Besides, they argue that classifiers in Chinese specify definiteness, individuation, and number, which are the functions of determiners in languages with overt Ds like English. Therefore, argument nominals in Chinese should be represented as CLPs.

### 2.3.3 Yip (2008)

Yip (2008) provides arguments against Cheng and Sybesma (1999)'s CLP hypothesis. Yip (2008) first gives the definitions and distinguishes between sortal

classifiers (what Her 2010 defines as classifiers), mensural classifiers (what Her 2010 refers to as measure words), and true measures, which represent a unit of measure like dimensions (weight, height, and length), and length of time, for example, *gongjin* 'kimogram' and *mi* 'meter'.

(i) A sortal classifier 'individuates whatever it refers to in terms of the kind of entity that it is.' (Lyons 1977: 463),
(ii) A mensural classifier 'individuates in terms of quantity'. (Lyons 1977: 463)
(iii) A true measure does not individuate and only assigns to the noun the measurement that the numeral specifies.

Yip (2008) starts by pointing out the different syntactic behaviors true measures have. First, unlike sortal classifiers and mensural classifiers, true measures do not have postverbal [TM+N] construction as shown in (20).

(30) a. 我 想 買 把 刀
*wo xiang mai ba dao* (sortal classifiers)
I want buy CL knife
'I want to buy a knife'.

b. 我 想 買 打 蛋
*wo xiang mai da dan* (mensural classifiers)
I want buy M egg
'I want to buy a dozen of eggs.'

c. *我 想 走 哩 路
*wo xiang zou li lu* (true measures)
I want walk TM road
'I want to walk a mile.'

Second, although it has been known to many people that in the literature

Cantonese classifiers mark definiteness (Cheng and Sybesma 1999, Au Yeung 2005), Yip (2008) points out that Cantonese true measures actually do not appear at sentence initial.

(31) a. *bui caa hou jit* (Yip 2008: 5)
CL tea very hot
'The tea is very hot'

b. **cek dei hou gwai*
TM land very expensive
'The square feet of land is very expensive'

Third, unlike sortal classifiers mensural classifiers, true measures are disallowed to appear directly following demonstratives.

(32) a. 那 (一) 把 刀 很 鋒利
*na yi ba dao hen fengli*
that one CL knife very sharp
'That knife is very sharp.'

b. 那 *(一) 哩 路 很 難 走
*na yi li lu hen nan zou*
Dem one TM road very difficult walk
'That mile is hard to walk.'

Yip (2008) thus argues against Cheng and Sybesma's (1999) overgeneralization that definiteness is the only reason which decides the occurrences of all classifiers in Mandarin Chinese. The prohibition of [TM+N] occurring in the sentence initial position is not just due to its definiteness, but its incompetence to individuate.

## 2.4 Other analyses on the distribution of [Num+CL+N] and [CL+N]

The dominant analyses for the distribution of [Num+CL+N] and [CL+N] are concerning (in)definiteness and quantity-denoting expressions as mentioned above. However, some researchers propose analyses beyond the dominant analyses. Two recent views will be introduced in this section.

### 2.4.1 Ji (2007)

Ji (2007) argues against Cheng and Sybesma (1999) that he thinks [CL+N] pattern is the result of the phonological reduction of the numeral *yi* and the two patterns have the same meanings and distributions. He opposes to Cheng and Sybesma's (1999) argument that indefinite [CL+N] can only have nonspecific reference, while indefinite [*yi*+CL+N] can have both specific and nonspecific references by providing some evidence. First, Ji (2007) points out that the specific and nonspecific reading of [CL+N] is depending on the verb tense. See (33a) and (33b) for the contrast.

(33) a. 我 想　　看　本 書
*wo xiang　kan ben shu*
I　want　read CL book
'I would like to read a book.'

b. 昨晚　　我 看了　　本 書
*zuowan　　wo kan-le　　ben shu*

yesterday evening I read ASP CL book
'I read a book yesterday evening.'

In (33a), the indefinite [CL+N] phrase *ben shu* tends to have a nonspecific reference. Yet *ben shu* can only have a specific indefinite interpretation in example (33b). Therefore, Ji (2007) argues that the verb tense plays an important role in deciding the [CL+N] phrase has a specific or nonspecific indefinite interpretation, and same for [*yi*+CL+N].

Ji (2007) also argues against the two contexts Cheng and Sybesma (1999) provide. One context Cheng and Sybesma (1999) propose is that the object of bounded predicates which are bounded for reasons independent of the object cannot be nonspecific indefinite. Thus, according to this analysis, [CL+N] cannot occur as an object in such a context. Take a pair of examples from Cheng and Sybesma (1999).

(34) a. 我 喝完 了 一 碗 湯
*wo hewan le yi wan tang*
I drink-finish ASP one bowl soup
'I finished a bowl of soup.'

b* 我 喝完 了 碗 湯
*wo hewan le wan tang*
I drink-finish ASP bowl soup
'I finished a bowl of soup.'

Ji (2007) argues that the ungrammaticality of (34a) is due to the syllable of both N and V compound. It sounds natural by substituting the N to more syllables or the verb

compound to monosyllable.

(35) a. 我 喝完 了 碗 酸辣湯
*wo he-wan le wan suanlatang*
I drink-finish ASP CL sour-hot-soup
'I finished a bowl of sour-hot soup.'

b. 我 喝 了 碗 湯
*wo he le wan tang*
I drinkASP CL soup
'I drank a bowl of soup.'

Ji (2007) provides an explanation for (34) and (35) by adopting Duanmu & Lu (2002) and Duanmu's (2000, 2001) studies on stress and word length. Duanmu & Lu (2002) argue that word choices in Chinese are concerning stress. Nonhead Stress Rule states that syntactic nonheads should have stress. To obey this rule, objects in Chinese should have more stress than the verb. A word with more stress should not be shorter than a word with less stress. Therefore, an object should not be shorter than its preceding verb. Ji (2007) extends the analysis to the use of [CL+N] and claims that classifiers in Mandarin are usually unstressed and numerals are stressed. The occurrence of [CL+N] or the deletion of *yi* in [*yi* +CL+N] can be explained by the Nonhead Stress Rule. *Yi* in [*yi*+CL+N] phrases can be deleted when the object is a compound noun, but it cannot be deleted when the verb is a compound with the object noun being monosyllabic, as the above examples show.

Another context that Cheng and Sybesma (1999) provide is related to the

secondary predication. The object nominal in such sentences functions as the subject of the secondary predicate. [*yi*+CL+N] in such positions cannot have their *yi* deleted. Ji (2007) argues that the grammaticality of (36a) ad (36b) is very subjective. Some of his informants think both sentences are ungrammatical. For instance,

(36) a. 我 教 過 一 個 學生 很 聰明
*wo jiao guo yi ge xuesheng hen congming*
I teach ASP one CL student very intelligent
'I once taught a student who was very intelligent'

b.*我 教 過 個 學生 很 聰明
*wo jiao guo ge xuesheng hen congming*
I teach ASP CL student very intelligent
'I once taught a student who was very intelligent'

In conclusion, Ji (2007) states that both [*yi* +CL+N] and [CL+ N] have two indefinite interpretations: specific and nonspecific. The appropriate interpretation in particular contexts is related to the verb form. Contrary to Cheng & Sybesma's (1999) view, Ji (2007) supports Lu (1990) and Chen's (2004) analyses that [CL+ N] results from the deletion of *yi* in [*yi*+Cl+N], and *yi* cannot be deleted in certain contexts for phonological reasons.

**2.4.2 Yang (2002)**

Yang (2002) discusses [CL+N] in one of the chapter in his dissertation. He agrees with Lu (1990) and Chen (2004) that the bare classifier phrase [CL+N] is the

suppressed form of [*yi*+CL+N]. In addition, he suggests a new hypothesis that classifiers in Mandarin Chinese are in fact clitics and are freely alternate with [CL+N] in a variety of contexts. Yang (2002) proposes two arguments related to this assumption. He claims that in Chinese a numeral may be optionally omitted from [*yi*+CL+N] context if and only if 1) there is another hosting word (a demonstrative, a quantifier, or a verb) preceding [CL+N], and 2) a strict locality condition is satisfied between the hosting word and [CL+N]. Evidence provided to support his argument is mainly based on the study Zwicky & Pullum (1983) propose. Zwicky and Pullum (1983) propose some criteria to capture the characteristic distinction between clitics and affiexes in general. Six lines of the criteria are A. the degree of selection between the dependent morpheme the word to which it is attached, B. arbitrary lexical gap, C. phonological idiosyncrasies, D. semantic idiosyncrasies, E. syntactic operations affecting the combinations, and F restrictions on the combinability of clitics with inflectional affixes. Yang (2002) fits the classifiers in Mandarin into these criteria and gets the conclusion that Chinese classifiers do perform like clitics. A crucial evidence Yang (2002) adopts is the fact that *yi*-omission has restrictions not only on syntactic positions but also on the preceding elements to attach to. For example,

(37) a. 那　一　本 書　很　貴
*na　(yi)　ben shu　hen gui*
that　one　CL book very expensive
'That book is very expensive.'

b. 那　厚厚的　*(一)　本 書　很 貴
*na　houhoude　*(yi)　ben shu　hen gui*
that　thick-DE　one　CL book very expensive
'That thick book is very expensive.'

Example (37) shows that within a full NP, if the demonstrative (or a quantifier) is separated from [*yi*+CL+N] by another modifier, the omission of the numeral becomes illegal. However, if we compare (36a) and (36b), we would find that [*yi*+CL+N] in both sentences occupy the same syntactic position. The only difference lies in the preceding element [*yi*+CL+N] attaches to. Therefore, Yang (2002) concludes that classifiers in Mandarin are clitics.

**2.5 Remarks**

Summarized from the above studies, the proposed issues concerning classifiers in [Num+CL+N] and [CL+N] are 1) whether [CL+N] is the omitted form of [*yi*+CL+N], and 2) the distribution of [*yi*+CL+N] and [CL+N]. While most analyses (Lu 1990, Chen 2004) agree that [CL+N] is the phonological reduction of [*yi*+CL+N], Cheng and Sybesma (1999) hold the opinion that they belong to different structures. Since Lu (1990) and Chen (2004) provide the contexts that [CL+N] can be interpreted

both as definite and indefinite, there is no reason to argue that [CL+N] and [*yi*+CL+N] belong to different structures. Also, the only value we can get from [CL+N] is one, but not other numbers. If we claim [CL+N] and [*yi*+CL+N] being different structures, why is it impossible to get other values rather than one from [CL+N]?

As for the second issue, most suggest that the occurrences of [*yi*+CL+N] and [CL+N] are due to indefiniteness and quantity-denoting expressions (Cheng and Sybesma 1999, Li 1998, Chen 2004, Huang, Li and Li 2009). Cheng and Sybesma (1999) argue that because subject positions and topic positions in Mandarin Chinese are always definite, it is impossible for [CL+N] to occur since [CL+N] can only be understood as indefinite. For those who claim that [CL+N] being the phonological reduction of [*yi*+CL+N], the prohibition of [CL+N] from topic or subject positions is due to both indefiniteness and quantity-denoting expressions. Those [*yi*+CL+N] appearing in topic or subject positions can never be interpreted as indefinite but quantity-denoting expressions. And when [*yi*+CL+N] is interpreted as numeral expression, it cannot delete *yi* to become [CL+N].

It seems plausible that the above analyses provide reasonable solutions for the second issue. Two assumptions are made according to the above analyses. First, in positions where they are realized as definite, [CL+N] would never appear. Second, in positions where they are realized as indefinite, [CL+N] should occur.

Counterexamples have been found and proved that these two assumptions overgenerate the language use in Mandarin Chinese. Thus in the following chapter, I will point out the problems under the above analyses to show that previous studies fail to account for many counterexamples found in Mandarin Chinese. I will argue that neither indefiniteness nor quantity-denoting expression can account for the distribution of the bare classifier phrase [CL+N].

# Chapter 3

## Unsolved Problems for [*yi*+CL+N] and [CL+N] in Mandarin Chinese

### 3.1 Assumptions from previous studies

In last chapter, studies related to the interpretation, the distribution and the internal structure of [Num+CL+N] and [CL+N] have been reviewed. As mentioned before, two factors that decide the distribution of [*yi*+CL+N] and [CL+N] are definiteness and quantity-denoting expressions. When [*yi*+CL+N] is interpreted as indefinite (whether specific or non-specific), it can be reduced to [CL+N]. The exclusion of [CL+N] occurring in subject or topic positions is that [*yi*+CL+N] is realized as quantity-denoting when it occurs in subject position, and that quantity-denoting [*yi*+CL+N] can never be reduced to [CL+N]. Two assumptions are made under the above analyses. First, the bare classifier phrase [CL+N], as a suppressed form of indefinite [*yi*+CL+N], can only occur in indefinite positions. Second, in a syntactic position which is realized as indefinite, [CL+N] should always be allowed to occur. However, the idiosyncratic examples are found that [CL+N] appear in positions which are considered definite or quantity-denoting. Besides, some

indefinite positions do not allow [CL+N] to appear. In this chapter, I am going to list these counterexamples and point out that indefiniteness and quantity-denoting expressions suggested by previous studies can only explain the occurrence of [CL+N] in some cases but cannot correctly predict the positions for the bare classifier phrase [CL+N] to occur.

### 3.1.1 [CL+N] only occurs in indefinite positions?

The first assumption made from the previous studies, as mentioned above, is that the bare classifier phrase [CL+N] can only occur in indefinite positions. Supporting evidence from the previous studies is that [CL+N] never occurs in definite positions such as subject or topic positions. Cheng and Sybesma (1999) argue that [CL+N] in Mandarin carries a [-definite] feature that prohibits it from definite positions, while Lu (1990) and Chen (2004), claiming that [CL+N] being the reduced form of indefinite [*yi*+CL+N], suggest that [CL+N] only appears in indefinite position where indefinite [*yi*+CL+N] occurs.

However, with a closer examination, I have found that it is not the case. First, in the definite position where D head is occupied by a demonstrative *zhe* 'this' or *na* 'that', [CL+N] is always allowed to appear. (38a), (38b) and (38c) show the three distributions for [Dem+CL+N].

(38) a. 這/那 (一) 本 書 我 想 看 (Topic position)
*zhe/na yi ben shu wo xiang kan*
this/that one CL book I want see
'I want to read this/that book.'

b. 這/那 (一) 本 書 很 好 看 (Subject position)
*zhe/na yi ben shu hen hao kan*
this/that one CL book very good see
'This/that book is very good.'

c. 我 買 了 這/那 (一) 本 書 (Postverbal position)
*wo mai le zhe/na yi ben shu*
I buy ASP this/that one CL book
'I bought this/ that book.'

When [*yi*+CL+N] follows a demonstrative, it no longer serves as an indefinite expression but a definite expression since the D head is occupied by an element carrying a definite feature. But (38a), (38b) and (38c) clearly show that even quantity-denoting [*yi*+CL+N] can undergo *yi* omission. This fact fails out of the prediction under the first assumption.

Another counterexample found in Mandarin is that, contrary to what it is assumed in the first assumption, *yi* in many quantity-denoting [*yi*+CL+N] can also be reduced.

(39) 我 買了 (一)磅 蘋果
*wo mai-le yi bang pinguo*
I buy-ASP one pound apple
'I bought one pound of apples.'

(40) 三 個 人 各 吃了 (一) 碗 飯
*san ge ren ge chi-le yi wan fan*
three CL person each eat-ASP one M rice
'For these three people, each of them has a bowl of rice.'

(41) 他 送了 (一) 箱 芒果 給 我們 ，但 顯然 不夠
*ta song-le yi xiang mangguo gei women dan xianran bugou*
he give-ASP one M mango for we but obviously not-enough
'He gave one box of mangoes for us, but obviously they are not enough.'

In (39), *yi* in *yi bang* can only refer to the number "one" but not an indefinite expression which refers to "any pound of apples." Similarly, in (40), *yi* in *yi wan* denotes the number "one", meaning these three people each has one bowl of rice instead of any bowl of rice. In (41), *yi* in *yi xiang* specifies the number 'one' rather than the indefinite reading as well. To briefly sum up, all [*yi*+CL+N] in above examples mark numbers instead of indefiniteness, yet they are all allowed to be reduced to [CL+N], which is not what the first assumption predicts.

Though I present some counterexamples above that some quantity-denoting [*yi*+CL+N] can be reduced to [CL+N], there are some examples which do not allow *yi* omission.

(42) 我 買了 *(一)磅 蘋果，不 是 兩 磅
*wo mai-le yi bang pinguo bu shi liang bang*
I buy-ASP one pound apple not be two pound
'I bought one pound of apples, not two pounds.'

(43) 三 個 人 各 吃了 *(一) 碗 飯，不 是 兩 碗
*san ge ren ge chi-le yi wan fan bu shi liang wan*
three CL person each eat-ASP one M rice not be two M
'For these three people, each of them has a bowl of rice.'

(44) 叫 你 帶 *(一) 個 朋友 來， 你 帶了 三 個
*jiao ni dai yi ge pongyou lai ni dai-le san ge*
call you bring one CL friend come you bring-ASP three CL
'I told you to bring one friend here, but you brought three.'

Actually, (42) and (43) are very similar to (39) and (40), but both (42) and (43) have a second half of the sentence with the other quantity-denoting [Num+CL+N] in it. Contexts in (42), (43) and (44) are known as contrastive contexts since two [Num+CL+N] are being compared. Again, the question pops out: what might be the reason for similar sentences to be grammatical in (39) and (40) but not in (42) and (43)?

**3.1.2 All [CL+N] are allowed in indefinite positions?**

The second assumption from previous studies concerns the occurrence of the bare classifier phrase [CL+N]. Cheng and Sybesma (1999) claim that all [CL+N] in Mandarin are interpreted as indefinite and thus occur in indefinite positions. Lu (1990) and Chen (2004), suggesting [CL+N] being the suppressed form of indefinite [*yi*+CL+N], also claim that [CL+N] occurs in indefinite positions. The implication from both analyses is that wherever a position is indefinite, [CL+N] can occur.

However, counterexamples are also found that [CL+N] are prohibited in some indefinite positions. The positions prohibiting [CL+N] are listed below.

**(45) The second object of the ditransitive construction**

a. 我 送了 (一) 個 朋友 *(一) 本 書
*wo song-le (yi) ge pongyou *(yi) ben shu*
I give-ASP one CL friend one CL book
'I gave a friend a book.'

b. 我 送了 (一)本 書 給 (一)個 朋友
*wo song-le *yi ben shu gei ?yi ge pongyou*
I give ASP one CL book for one CL friend
'I gave a book to a friend.'

**(46) The possessor of the subject**

*(一) 位 老師 的 研究室 起火 了
*yi wei laoshi de yianjiushi qihuo le*
one CL teacher DE lab on fire PAR
'A teacher's lab is on fire.'

**(47) The NP following DE**

a. 我 買了 小小的 *(一) 朵 花
*wo mai-le xiaoxiaode yi duo hua*
I buy-ASP small one CL flower
'I bought a small flower.'

b. 我買了 他 寫 的*(一) 本 書
*wo mai-le ta xie de yi ben shu*
I buy ASP he write DE one CL book
'I bought one of the books he wrote.'

**(48) The object following a disyllabic verb**

a. 我 買了 (一) 張 票
*wo mai-le yi zhang piao*
I buy ASP one CL ticket
'I bought a ticket.'

b. 我 購買了 *(一) 張 票
*wo goumai-le yi zhang piao*
I buy ASP one CL ticket
'I bought a ticket.'

In (45a), while [*yi*+CL+N] in an indirect object position of a ditransitive structure can always be reduced to [CL+N], [*yi*+CL+N] in a direct object position cannot; yet when the indirect object is led by *gei* 'to', the sentence sounds better. Since both objects are considered indefinite, according to the previous account, there is no reason why [*yi*+CL+N] in the indirect object position can be reduced to [CL+N] but one in direct object cannot.

(46) is the second counterexample I have found which previous analyses cannot account for. When [*yi*+CL+N] serves as a possessor of the subject, not the "real subject", *yi* cannot be reduced. The previous account suggests that [CL+N] cannot appear in subject or topic position because this position is definite. But in (46), the definiteness of the subject is defined by the whole NP *yi wei laoshi de yianjiushi* 'a teacher's lab', not the possessor *yi wei laoshi* 'a teacher.' The assumption given in the previous analysis predicts that [CL+N] can occur here since this position *yi wei laoshi* 'a teacher.'is indefinite; but example (46) tells us that the prediction is incorrect.

The third counterexample comes to the NP following *de*. When *de* of a relative clause or of a pre-classifier modifier phrase intervenes between *yi* and the classifier, *yi* omission is blocked. But again the previous analysis fails to cover the prohibited

[CL+N] here. The modifier phrase or the relative *de* does not specify the indefiniteness of the whole NP. Besides, if we slightly change the order of the modifier phrase and the relative clause, as shown in (49b), the sentence is grammatical with [CL+N] occurring.

(49) a. 我 買了 小小的 *(一) 朵 花
*wo mai-le xiaoxiaode yi duo hua*
I buy-ASP small one CL flower

b. 我 買了 (一) 朵 小小的 花
*wo mai-le yi duo xiaoxiaode hua*
I buy-ASP one CL small flower
'I bought a small flower.'

(50) a. 我買了 他 寫 的 *(一) 本 書
*wo mai-le ta xie de yi ben shu*
I buy-ASP he write DE one CL book

b. 我買了 (一) 本 他 寫 的 書
*wo mai-le (yi) ben ta xie de shu*
I buy-ASP one CL he write DE book
'I bought a books he wrote.'

When the modifier phrase *xiaoxiaode* 'small' and the relative clause *ta xie de* 'he writes' move to the front, both sentences are grammatical with the occurrence of [CL+N]. This again shows that indefiniteness is not the only factor that affects the reduction of *yi* in [*yi*+CL+N].

The fourth counterexample concerns to the syllable of the verb preceding [*yi*+CL+N]. I have found that the indefinite [*yi*+CL+N] is allowed to be reduced to

[CL+N] if the preceding verb is monosyllabic, while it usually cannot be reduced to [CL+N] if the preceding verb is disyllabic. In example (48), *mai* and *goumai* are synonyms denoting the action of "purchase". But [CL+N] only appears after the monosyllabic verb *mai* instead of *goumai*. The previous analysis which assumes all indefinite [*yi*+CL+N] can be reduced to [CL+N] fails to predict the ungrammaticality of (48b).

### 3.1.3 Other special contexts which block the occurrence of [CL+N]

Huang, Li &Li (2009) discuss some contexts which have indefinite [*yi*+CL+N] occurring in subject or topic position.

(51) 你 看，一 隻 青蛙 跳 了
*ni kan yi zhi qingwa tiao le*
you see one CL frog jimp PAR
'Look! A frog jumped.'

(52) 一 個 人 來了 /正 在 念書
*yi ge ren lai-le zheng zai nianshu*
one CL person come-ASP / right at readbook
'A person came/ is reading.'

(53) 一 個 高手 下錯 棋 很 不 可能
*yi ge gaoshou xiacuo qi hen bu keneng*
one CL high-hand play-wrong chess very not possible
'It is unlikely for an expert to play chess wrong.'

Huang, Li and Li (2009) argue that although [yi+CL+N] in these sentences look like indefinite expressions, they function more like generic expressions or definite expressions. Huang, Li and Li (2009) argue that example (51) and (52) describe the

scenes both the speaker and the hearer perceive. Therefore, the referents must be definite for both the speaker and the hearer. In example (53), though the form of *yi ge gaoshou* 'an expert' is indefinite, [yi+CL+N] in fact is realized as generic, denoting "all experts". Therefore, Huang, Li and Li (2009) conclude that indefinite [Num+CL+N] never occurs in subject positions. Those occur in subject or topic positions must be interpreted as generic, quantity-denoting or definite. However, as noted earlier, [CL+N] might have the chance to occur in quantity-denoting positions. Claiming (51) and (52) being quantity-denoting simply does not exclude [CL+N] to occur here.

Another counterexample related to the occurrence of [CL+N] is the pre-classifier/ measure word adjective. A special construction has been discussed where classifiers/ measure words are modified by an adjective, as shown in (54) below, where numerals and classifiers/ measure words are separated by an adjective.

(54) a. 一 大 顆 蘋果
*yi da ke pingguo*
one big CL apple
'1 big apple'

b. 一 整 箱 蘋果
*yi zheng xiang pingguo*
one whole M apple
'1 whole box of apples'

Simpson (2005) refers to this constriction in his study and concedes that only a

very limited range of adjectives can be used. Liu (2010), Zhang (2011), and Her and Hsieh (2010: 6, fn. 8) also note that those adjectives are usually the ones denoting size, for example, *da* ‘big’ and *xiao* ‘small’, and wholeness such as *zheng* ‘whole’; those referring to weight and color are disallowed.

(55) a. *一　重　顆　蘋果
*yi zhong ke pingguo*
one heavy CL apple
(intended) ‘1 heavy apple’

b. *一　紅　箱　蘋果
*yi hong xiang pingguo*
one red M apple
(intended) ‘1 red box of apples’

In addition, any kind of extension, for instance, degree modification, is likewise disallowed, as shown in (56).

(56) a.*一　很　大　顆　蘋果
*yi hen da ke pingguo*
one very big CL apple
(intended) ‘A very big apple’

b.*一　比較　小　箱　蘋果
*yi bijiao xiao xiang pingguo*
one relatively verysmall M apple
(intended) ‘1 relatively small box of apples’

What I have found is that under the construction [*yi*+A+C/M+N], *yi* cannot be deleted and becomes [A+C/M+N]. Example (57) shows the contrast.

(57) a. 我 買了　一　大　顆　蘋果
*wo mai-le yi da ke pingguo*
I buy-ASP one big CLapple
‘I bought a big apple.’

b. ?我 買了 大 顆 蘋果
*wo maile da ke pingguo*
I buy-ASP big CL apple
'I bought big apples.'

Actually (57b) is grammatical. In this sentence, we cannot get the meaning of "an apple" but simply "apples which are big". In other words, the omission of *yi* here does not preserve the value *1*. Thus, [A+C/M+N] is a totally different structure from [*yi*+A+C/M+N].

What we are curious here is why pre-classifier adjectives block *yi* omission in [*yi*+A+C/M+N] and why we can't get the default value 'one' under this construction. Since the inserting of an adjective does not change the indefiniteness of object, according to the previous analysis, [*yi*+A+C/M+N] can be reduced to [A+C/M+N]. However, the linguistic evidence shows just the opposite.

The above counterexamples I illustrate all fall out the predictions among the previous analyses. Those counterexamples show that the assumptions made by previous analyses are insufficient to explain the interactions between [*yi*+CL+N] and [CL+N]. In above counterexamples, all [*yi*+CL+N] stay in indefinite positions, yet *yi* omission is still blocked. This leads us to think about other possibilities which might block the occurrence of [CL+N].

### 3.2 Distributions of [CL+N]: an overview

The presented counterexamples indicate that previous studies do not thoroughly investigate all the occurrences of [CL+N], and thus leave plenty of idiosyncrasies unsolved. After a closer examination on the language use in Mandarin, I summarize the distributions which allow the occurrence of [CL+N], and together with distributions which do not allow the occurrence of [CL+N], trying to generalize some rules among these distributions.

#### 3.2.1 Positions allowing the occurrence of [CL+N]

Most studies agree that [CL+N] occurs in indefinite positions, but as what I have observed above, those studies simply discuss few contexts. Thus, I use the database to search all the possibilities in our authentic language use. Those contexts are summarized in following examples.

**(58) Indefinite positions**

a. 他 買了 (一)顆 蘋果 (postverbal)
*ta mai-le yi ke pingguo*
he buy ASP one CL apple
'He bought an apple.'

b. 他 連 (一) 個 便當 都 吃不起 (post-prepositional)
*ta lian yi ge baindang dou chi-bu-qi*
he LIAN one CL mealbox DOU eat-not-QI
'He can't even afford a mealbox.'

c. 我 把 (一) 本 書 弄丟 了 (objects of BA construction)
*wo ba yi ben shu nong-diu le*
I BA one CL book do-lose PAR
'I lost a book.'

**(59) Post-determiner positions**

a. 這/那 (一) 本 書 我 想 看 (Topic position)
*zhe/na yi ben shu wo xiang kan*
this/that one CL book I want see
'I want to read this/that book.'

b. 這/那 (一) 本 書 很 好 看 (Subject position)
*zhe/na yi ben shu hen hao kan*
this/that one CL book very good see
'This/that book is very good.'

c. 我 買 了 這/那 (一) 本 書 (Postverbal position)
*wo mai le zhe/na yi ben shu*
I buy ASP this/that one CL book
'I bought this/ that book.'

**(60) Quantity-denoting positions**

a. 我 買了 (一)磅 蘋果 (postverbal)
*wo mai-le yi bang pinguo*
I buy-ASP one pound apple
'I bought one pound of apples.'

b. 他 連 一 點 錢 也 不 願意 還 (post-prepositional)
*ta lian yi dian qian ye bu yuanyi huan*
he LIAN one a little money alos not willing payback
'He doesn't even want to pay back a little money.'

c. 他 把 (一) 塊 錢 弄丟 了 (objects of BA construction)
*ta ba yi kuai xian nong-diu le*
he BA one M money do-lose PAR
'I lost one dollar.'

The post-verbal position, as in (58a), (59c) and (60a), is the most common context

for [CL+N] to occur. This position can be either quantity-denoting or indefinite, depending on the contexts. [*yi*+CL+N] and [CL+N] can also be preceded by determiners *zhe* (this) and *na* (that). Positions such as Topic positions and Subject positions are definite by default (Cheng and Sybesma 1999, Chen 2004, Li 1996, Huang, Li and Li 2009), yet postverbal positions are not. Postverbal positions are indefinite by nature, but once they are preceded by determiniers, the positions are forced to be definite,

The contexts in which [*yi*+CL+N] and [CL+N] appear after prepositions have never been discussed before in previous studies, but they are easily found in commercial slogans or daily conversations. A note of caution is that the prepositions occurring before [CL+N] are very limited. For example, no [CL+N] is found after the preposition *guanyu* 'about.' BA constructions like example (58c) and (60c) are really controversial. Cheng and Sybesma (1999) disagree with any [CL+N] occurs after BA construction because they claim that this position is definite. Lu (1990), on the other hand, thinks this sentence is grammatical because this position can be interpreted as indefinite. I agree with Lu's (1990) account because the object appearing after *ba*, as shown in (58c) and (60c), does serve as an indefinite object. The referent is definitely known to the speaker yet unknown to the hearer. The following example shows the most common answer when the hearer hears (58c).

(61) Speaker:我 把 (一) 本 書 弄丟 了
*wo ba yi ben shu nong-diu le*
I BA one CL book do-lose PAR
'I lost a book.'

Hearer: 哪 本 書？
*nei ben shu*
which CL book
'Which book?'

For the speaker, *nei ben shu* 'which book' is not specified; the speaker must know the referent he refers to, but the information he intends to provide is simply "a book of mine." However, for the hearer, the referent is a brand new information which is not mentioned before. In context like example (61), *ba* object is definitely indefinite; the referent known to the speaker yet unknown to the hearer is referred to as an indefinite and non-specific referent.

Basically, bare classifier phrases [CL+N] have similar distributions in indefinite and in quantity-denoting positions that they occur postverbally, post-prepositioally, and serve as objects in BA constructions. Also, none of them appear in subject or topic positions. As for definite positions, wherever there is a determiner occupying the D head, [CL+N] is allowed to occur.

### 3.2.2 Positions disallowing the occurrence of [CL+N]

Since I have almost listed all the examples which [CL+N] is not allowed, here I

will simply give a brief summary below.

**(62) Distributions disallowing [CL+N]**:

a. Postverbal quantity-denoting positions in contrastive contexts (see 42 to 44)
b. The second object of the ditransitive construction (see 45)
c. The possessor of the subject (see 46)
d. The NP after DE/DE modifier (see 47)
e. The object following a disyllabic verb/preposition (see 48)
f. When [CL+N] has a pre-C/M modifier adjective (see 57)

Compared with positions allowing [CL+N], most positions disallowing [CL+N] are not postverbal nor post-prepositional positions. The only two postverbal and post-prepositional positions disallowing [CL+N] are those with disyllabic Vs and Ps. This suggests that [CL+N] might have certain selection restrictions on the preceding elements. However, the prohibition of [CL+N] from postverbal positions in contrastive contexts still remains a mystery.



### 3.3 Problems for adopting previous accounts

#### 3.3.1 Properties that deny previous accounts

The major challenge for previous analyses proposed is its failure to thoroughly predict the occurrence of the bare classifier phrase [CL+N]. Previous accounts do explain why [CL+N] occurs in certain positions instead of others, yet they do not correctly predict the occurrences of [CL+N]. That is to say, [CL+N] do appear in

some indefinite positions, but the prohibition from certain indefinite positions cannot be explained by those accounts. In last section, I list the contexts which block the occurrence of [CL+N]. Some properties related to those contexts are discussed in more detail below.

### 3.3.2 The selections on the phrase preceding [CL+N]

With a closer examination on the contexts allowing [CL+N] and disallowing [CL+N], I have found that there is a tendency for phrases of certain syntactic categories to precede [CL+N]. The three syntactic categories are verbs, prepositions and demonstratives. Indefinite [*yi*+CL+N] in postverbal positions, being specific or nonspecific, are usually allowed to have the reduced form [CL+N]. Also, examples above show that within the two sentences denoting the same meaning, *yi* in [*yi*+CL+N] is allowed to be omitted when [*yi*+CL+N] follows the verb instead of other syntactic categories. In addition to verbs, I have also found indefinite bare classifier phrase [CL+N] appearing after prepositions. Although very limited, prepositions such as *dang*, *lian*, and *cong* are found after [CL+N]. Examples are shown in below.

(63) a. 他 連 (一)小碗 麵 也 吃不完
*ta lian yi xiao-wan mien ye chi-bu-wan*
he LIAN one small-M noodle also eat-not-finish
'He cannot even finish a small bowl of noodles.'

b. 張三　　從　(一)個　不知名的　　小鎮　　來　的
*Zhangsan zong　yi ge　buzhiming de　xiaocheng　lai　de*
Zhangsan from　one C　unknown DE　small town　come DE
'Zhangsan came from an unknown small town.'

As for definite positions, whenever the D head is occupied by a determiner, [CL+N] is allowed to appear. The tendency of [CL+N] following the phrase of certain categories shows that there must be a selectional restriction relationship between the classifiers in [CL+N] and the preceding phrases.

### 3.3.3 Classifiers cannot be too far away from the preceding verb

Another situation that indefiniteness cannot explain is that the classifiers in [CL+N] cannot be too far away from the verb in double object constructions. I have mentioned that a direct object [*yi*+CL+N] cannot be reduced to [CL+N] in ditransitive construction. Somehow if we replace the NP in indirect object with pronouns, the sentence becomes grammatical.

(64) a. 我　送了　(一) 個 朋友　*(一)　本 書
*wo　song-le　yi ge pongyou　yi ben shu*
I　give-ASP one CL friend　one CL book
'I give a friend a book.'

b. 我　送了　他 (一)　本 書
*wo　song-le　ta　(yi) ben shu*
I　give-ASP　he one CL book
'I gave him a book.'

In a ditransitive construction, [*yi*+CL+N] cannot be reduced to [CL+N] in secondary objects when there is an NP between the verb and [*yi*+CL+N]. However, the only possible elements between them are pronouns. This suggests that classifiers in [CL+N] cannot be too far away from the verb. A DP analysis seems to have nothing to say to explain this.

### 3.3.4 Phonological restrictions on the preceding element and [CL+N] itself

In addition to the syntactic selections on the phrase preceding [CL+N], the number of syllables of the preceding phrase seems to be another issue to focus on. As noted earlier, [CL+N] does not occur after a disyllabic verb but a monosyllabic verb. This has nothing to do with the indefiniteness of the NP but more like the phonological restriction on preceding elements. The phonological restriction not only reflects on the elements preceding [CL+N] but also on the classifier or the measure word itself. Look at the example below.

(65) a. 我 買了 (一) 箱 書
*wo mai-le yi xiang shu*
I buy ASP one M book

b. 我 買了 *(一) 箱子 書
*wo mai-le yi xiangzi shu*
I buy-ASP one M book
'I bought a box of books.'

In (65a) and (65b), all native speakers agree *xiangzi* and *xiang* are exactly the same, yet *xiangzi* does not allow *yi*-omission. Current analysis fails to explain the prohibition of (65b).

Similar phenomenon is also observed when the bare classifier phrase [CL+N] occurs with prepositions. An indefinite *yi* classifier phrase can undergo *yi*-omission when a monosyllabic, for example, *zong* 'from' preposition precedes it; yet *yi*-omission is blocked when a disyllabic preposition, such as *guanyu* 'about', occurs. See (66a) and (66b) below.

(66) a. 張三　從　(一)個　不知名的　小鎮　來　的
*Zhangsan zong yi ge buzhiming de xiaocheng lai de*
Zhangsan from one C unknown DE small town come DE
'Zhangsan came from an unknown small town.'

b. 這　是 關於　*(一)個 小女孩　的　故事
*zhe shi guanyu yige xiaonuhai de guoshi*
this be about one little girl DE story
'This is a story about a little girl.'

All facts show that those phonological restrictions on the occurrence of [CL+N] do not come from the contents of the DP. These all show that simply adopting previous accounts are insufficient.

### 3.3.5 Problems for adopting any syntactic approach alone

To summarize this section, the occurrences of [CL+N] cannot be explained by

previous analyses. Besides, many properties of classifiers in [CL+N] do not seem to be syntactic in nature, including an obligatory phonetic realization of the preceding and following elements and some idiosyncratic distributional properties. Although the assumptions under the previous analyses seem to predict some occurrences of [CL+N], there are certain contexts which cannot be pictured by those assumptions. All those point to the fact that beyond indefiniteness and quantity-denoting expressions, there are other factors that might contribute to the interactions between [*yi*+CL+N] and [CL+N]. Some modifications are inevitably needed to reach a more convincing account of the distribution of [*yi*+CL+N] and [CL+N].

# Chapter 4

# A clitic Account

## 4.1 Classifiers in Mandarin as clitics?

Because the problems noted in chapter 3 cannot be addressed by syntactic theories satisfactorily, and also the occurrence of classifiers requires an overt phonetic realization, we cannot adopt a purely syntactic analysis. The proposed analyses cannot account for the prohibition of the bare classifier phrase [CL+N] in certain contexts. Obviously, there must be other components of grammar involved. The component, I argue, is morphology. Classifiers in Mandarin should be analyzed as clitics. In this chapter, I will first briefly review the phenomenology of clitics and some of the properties of clitics. Then my proposal will be spelled out. I will provide supports for a clitic analysis on classifiers in Mandarin Chinese. Finally, I will show that all the properties discussed in chapter three can be accounted for by treating classifiers in Mandarin Chinese as clitics.

### 4.1.1 Definitions and Properties of clitics

Generally speaking, a clitic is understood as a linguistic element that is phonologically bound but cannot be regarded an affix because it is syntactically free and attaches to phrases instead of word stems (Halpern 1998). Roberts (2010) also defines clitics as elements that behave as if they were part of a word formed by their host in that they form a phonological unit with the host. They move syntactically with the host and seem to be unable to separate from their host or appear independently of it. Well-known examples are discussed in Zwicky and Pullum's (1983) study that they have English auxiliaries and the possessive marker *s* as examples of clitics. Zwicky and Pullum (1983) claim that auxiliaries and the possessive marker *s* in English can be distinguished from affixes for the word-like properties they have, and they can also be distinguished from words in that they have some affix-like properties (Zwicky 1985).

In both Zwicky and Pullum (1983) and Zwicky's (1985) work, the question of how we distinguish words from affixes, enumerating a number of properties in terms of which these differ is asked. Several properties related to clitics are demonstrated from three aspects. First, from a phonological aspect, clitics form a prosodic word with the word adjacent to it with regard to phonological rules that are sensitive to the word and phrase distinction, thus they are phonological dependent. Also, lack of

stress is the most common property characterizing clitics. Second, from a morphological aspect, clitics are affix alike for they do not occur in isolation nor do they have strict ordering. Third, from a syntactic aspect, either the clitic or the host in the [clitic+host] 'clitic group', unlike free-standing words, is not subject to syntactic processes.

Roberts (2010) also makes distinctions between clitics and bound morphemes. He states that clitics differ from bound morphemes in terms of distribution and the interpretation. Roberts (2010) argues that clitics show relative freedom of distribution. For example, in Romance, a clitic can be either proclitic or enclitic at the same time, depending on the context. As for the distribution, Roberts (2010) claims that many second-position clitics, compared with affixes, are rather free to the category of the elements they attach to.

Several studies concerning the phonological and syntactic properties of clitics are discussed in later studies as well. Another well-known approach is provided by Halpern (1995), who argues that clitics subcategorize the hosts they clictize to syntactically, phonologically and morphologically. A syntactic subcategorization refers to the notion that clitics subcategorize the syntactic category to which they may attach (CP, IP, VP or NP). This notion is referred to as "the tendency to attach to several syntactic categories" in previous studies. A phonological specification of a

clitic indicates whether it requires a prosodic constituent of a certain type for it to cliticize. It appears that clitics can be more or less selective about the constituents they attach to (Halpern 1995: 215). As for the morphological conditions, Halpern (1995) states that clitics attach to morphemes of certain "size". The "size" here refers to the largest constituent of a morpheme. These three aspects are important for my analysis illustrated in later sections.

### 4.1.2 Different types of clitics

Besides distinguishing clitics from other elements, Zwicky (1983:510) also distinguish different types of clitics. For those clitics that have the same distribution as that of associated free forms are defined as simple clitics, while for those do not have free counterparts, or have a different distribution from their free counterparts are defined as special clitics. Although the behaviors of special clitics are not clear and there have been conflicting analyses of the same phenomenon, it seems that they have something to do with principles which do not belong to the syntactic or phonological component (Anderson 2005).

Another way to classify clitics is to distinguish word-level clitics from phrase-level clitics; in other words, clitics can be viewed as 'phrasal affixes' (Bošković's 2000, and Anderson 2005). The main differences are that the 'stem' of

the clitic is a phrase instead of a word, and that the intervening element, the anchoring point, can be a syntactic element. Anderson (2005) re-examines the theoretical status of special clitics and defines them as 'morphosyntactic clitics'. What Anderson (2005) refers to is a linguistic form whose position concerning other elements of the phrase or clause follows a distinct set of principles, which is different from those of the independently motivated syntax of free elements of the language.

The definition provided above is quite different from the traditional definition of special clitics. Anderson (2005) claims that there is no need for a morphosyntactic clitic to be phonologically deficient; it may have the status of a prosodic word (Anderson 2005:77). Anderson (2005) also makes some modifications based on Klavans' study (1982, 1985) and proposes three parameters for the positioning of special clitics:

(66) A clitic is located
a. within the domain of some syntactic constituent ($X_0$ or $X_{max}$ for some value of X);
b. by reference to the first versus last daughter constituent of that domain
(interpreted either syntactically or prosodically); and
c. preceding or following this anchor point.

(Anderson 2005: 82)

Besides, Anderson (2005) proposes the fourth possible parameter, that is, the phonological host, mentioned in Klavans (1982, 1985); however, he eventually concludes that the phonological host of a clitic is determined by the prosodic property

of a language rather than lexically encoded.

To summarize the discussion in this section, it is clear that clitics have the following properties. Phonologically, they are dependent; they do not carry accents or stress. They have to lean on hosts to form a phonological unit to receive accent or stress. Syntactically, unlike bound morphemes and affixes, clitics are free. However, clitics are not subject to syntactic process as phrases do. Morphologically, clitics are like affixes because they never appear in isolation. Furthermore, clitics select the hosts they cliticize, which is referred to as "subcategorizations" The general idea is that clitics have certain requirements on the hosts they attach to, and those requirements include phonology, syntax and morphology. Now, after the background information of clitics in general and different types of clitics are given, I am going to point out how these approaches contribute to my proposal of treating classifiers in Mandarin as clitics.



**4.2 A clitic account for classifiers in Mandarin Chinese**

Since the analyses proposed in previous studies are insufficient to cover the idiosyncratic examples which block the *yi* omission in [*yi*+CL+N], here I adopt Yang's (2002) account that classifiers in Mandarin Chinese are clitics with some modifications. The reason for treating classifiers in Mandarin Chinese as clitics is that

classifiers in Mandarin Chinese share many properties with clitics. As mentioned in the last chapter, the blocking of [*yi*+CL+N] being reduced to [CL+N] is not purely syntactic but also related to phonological and morphological conditions. In this section, first I will point out the properties clitics and classifiers in Mandarin Chinese share. Then I will propose my clitic account and point out that this account can eliminate the insufficiency of previous analysis.

### 4.2.1 Properties shared by clitics and classifiers in Mandarin Chinese

As proposed in the section, clitics show a lot of differences from words and affixes with respect to phonology, syntax, and morphology. Below I will discuss the properties clitics and classifiers share from these three perspectives.

First, phonologically, clitics are dependent on their hosts to receive a phonetic realization, and usually they do not receive stress. For example, in English, possessive *s* cannot be pronounced independently, and thus it needs to attach to a host to get its phonetic realization. Also, possessive *s* is never stressed in English. As an isolated language, classifiers in Mandarin Chinese can be pronounced, yet they never receive stress unless they serve as the contrastive focus in contrastive contexts. Another property related to phonology is that clitics are very sensitive to the prosodic features of their hosts, which is what Halpern (1995) refers to as “subcategorization”.

Classifiers in Mandarin are not only sensitive to the preceding elements but also sensitive to classifiers themselves. Several examples I have investigated in previous chapter show the intendency for classifiers in Mandarin Chinese to choose monosyllabic verbs and prepositions rather than disyllabic ones, as examples (65) and (66) shown in chapter 3.

Second, syntactically, unlike affixes, clitics are independent and free to attach to certain categories, while at the same time they have to move with their hosts. As stated in previous sections, classifiers of bare classifier phrases [CL+N] in indefinite positions seem to select the preceding elements belonging to certain syntactic categories such as verbs and prepositions. The syntactic selection on the preceding elements is very similar to what Halpern (1995) identifies as "verb subcategorization", which refers to the syntactic requirements the classifiers have on their hosts.

Third, morphologically, classifiers in Mandarin do not stand alone, just like clitics which do not appear without attaching to their hosts. Classifiers such as *ge* '(a general classifier referring to most of the objects', *ke* '(referring to a 3D round-shaped entity', or *tiao* (classifiers denoting long-shaped entities)' do not stand alone. Though classifiers in other dialects such as Cantonese may occur without a preceding element, classifiers in Mandarin never does.

Various properties proposed above all suggest that classifiers in Mandarin

Chinese behave more like clitics instead of words. This simply answer the question why indefinite [*yi*+CL+N] cannot be reduce to [CL+N] when it is in subject or topic positions. In positions like subject or topic, classifiers never find hosts to cliticize, and a clitic would never occur independently without a host.

### 4.2.2 Subcategorizations of classifiers on their preceding elements

Obviously, classifiers in Mandarin Chinese share lots of properties with clitics, including phonological, syntactic, and morphological properties. The general idea is that classifiers in Mandarin Chinese need a preceding host to cliticize. However, many examples illustrated in last section show that [CL+N] cannot occur in certain indefinite contexts even when there is a host preceding it. This fact concerns the selections clitics have on the hosts. As mentioned in last section, classifiers in Mandarin seem to have a tendency to choose elements belonging to certain groups. In other words, the preceding elements which serve as the hosts have to meet the requirements of the clitics.

To briefly conclude, the presented properties and constraints classifiers in Mandarin Chinese have indicate that classifiers in Mandarin Chinese do behave like clitics. Therefore, from now on, I adopt the standard notation '=' for clitics, the occurrence of a clitic classifier may include strings such as [*yi*=CL+N], [V=CL+N]

and [P=CL+N]. In later discussion, I will discuss more details of these requirements.

## 4.3 Processes and principles involved in the clitic analysis of classifiers in Mandarin

I have presented the properties Mandarin classifiers have and have pointed out that those properties are similar to clitics. Also, as I have observed, classifiers in Mandarin Chinese have clear categorical constraints on the elements preceding them syntactically and phonologically. But what simply are those constraints classifiers have on their preceding elements? In the next section, I will give a thorough discussion on those constraints.

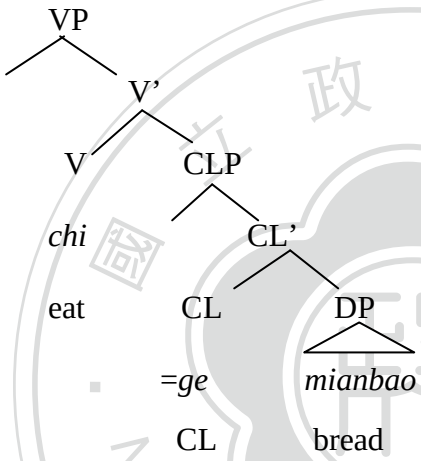
### 4.3.1 Classifiers in [CL+N] should be lexically governed by legal governors

In earlier sections, I have illustrated the tendency that classifiers in indefinite [CL+N] choose preceding elements which belong to certain syntactic categories. As what I have found, verbs, prepositions, demonstratives, and numerals can all appear preceding [CL+N]. But why do classifiers in indefinite or quantity-denoting [CL+N] select them rather than other syntactic categories?

By close examining those syntactic categories allowed to appear preceding classifiers phrases, such as PP, VP, NumP and DP, I have found that those syntactic

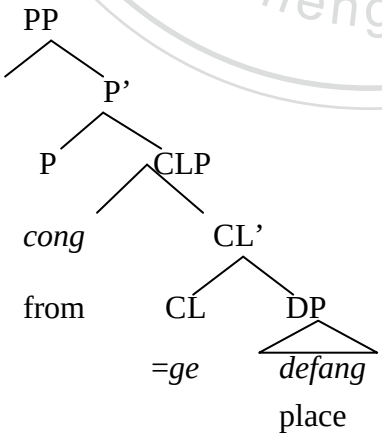
categories have immediate C-commanding heads for CLP. According to the definition given by Chomsky (1986b: 8), if A c-commands B, A does not dominate B and every X that dominates A also dominates B. (66a), (66b), (66c) and (66d) and (65e) are the tree structures for CLP following VP etc.

(67) a. CLP following VP



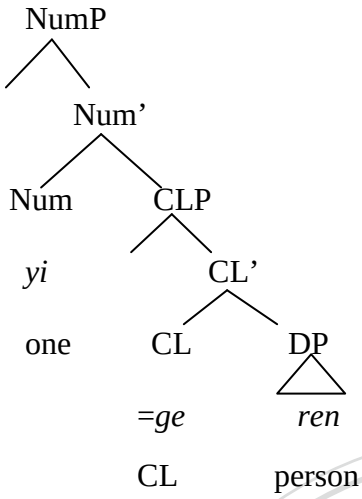

'to eat (a) bread'

c. CLP following PP



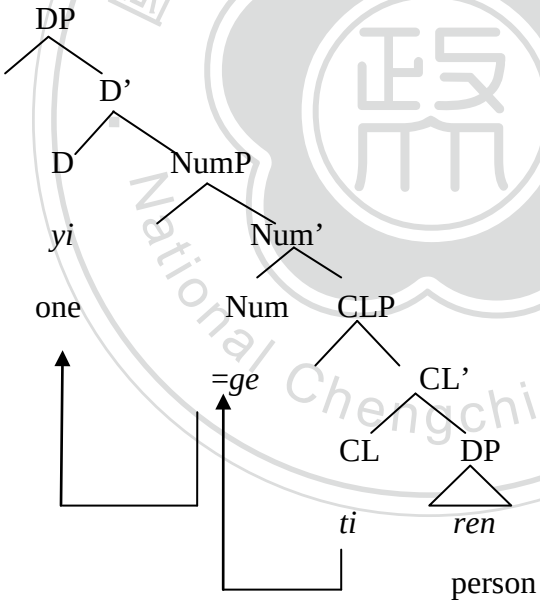

'from a place'

d. CLP following a quantity-denoting numeral




‘ a person’ (quantity-denoting)

e. CLP following a an indefinite numeral




‘ a person’ (indefinite)

The heads of (66a), (66b), (66c) and (66d) all c-command CLP, which meet the syntactic constraints of classifiers in bare classifier phrases. Therefore, VP, PP, NumP, and DP may co-occur with bare classifier phrases in Mandarin because they have an

overt c-commanding head. On the other hand, some modifiers such as AdjP I mentioned in previous chapters are disallowed to cooccur with bare classifier phrases [CL+N]. The inability for AdjP to cooccur with [CL+N] is due to its identity of being an adjunct. The head of an adjunct does not c-command the complement. Therefore, as an adjunct, the head of AdjP cannot c-command CLP, which excludes the possibility of AdjP appearing preceding the bare form classifier [CL+N] in Mandarin.

To conclude, those heads which occur preceding the bare classifier phrase [CL+N] are legal lexical governments for classifiers in indefinite or quantity-denoting [CL+N]. That is to say, the fact that some heads of certain syntactic categories allowed to appear before [CL+N] is not a coincidence but because classifiers of [CL+N] have a syntactic constraint on them. Here, I propose the first constraint for my clitic analysis:

(68) The bare classifier phrase [CL+N] can occur in indefinite or quantity-denoting positions if
(i) the classifier in [CL+N] is lexically governed by the proper government

This constraint explains why indefinite or quantity-denoting [CL+N] occurs after VP, PP, NumP and DP instead of NP, possessives or other syntactic categories.

### 4.3.2 The adjacency of classifiers in [CL+N] and the governors

In example provided in last section, I have shown that when the verb and the

classifier is intervened by a modifier, say, an AP, indefinite [*yi*=CL+N] cannot be reduced to [CL+N] even though the classifier is properly governed by its governor. Examples are shown in (68a) and (68b).

(69) a. 我 買了 小小的 *(一) 朵 花
*wo mai-le xiaoxiaode yi duo hua*
I buy-ASP small one CL flower

b. 我 買了 (一) 朵 小小的 花
*wo mai-le yi duo xiaoxiaode hua*
I buy-ASP one CL small flower
'I bought a small flower.'

The classifier *duo* are properly governed by the governor in both (68a) and (68b), yet [CL+N] can only occur in (68b). Yang (2002) also illustrates a similar example in his analysis that within a full NP, if the demonstrative is separated from the numeral classifier phrase [yi=CL+N] by another modifier, the omission of the numeral becomes illegal, as (69) listed below.

(70) 那 厚厚的 *(一)本 書 很貴 (Yang 2002:22)
*na houhoude yi ben shu hengui*
that thick one C book very expensive
'That thick book is very expensive.'

These facts indicate that there is a strong adjacency relationship between the governor and the classifier in [CL+N]; the classifier and its legal governor cannot be separated by any elements. Therefore, I propose my second constraint for the clitic account.

(71) The bare classifier phrase [CL+N] can occur in indefinite or quantity-denoting positions if
(i) the classifier in [CL+N] is lexically governed by the proper governor, and
(ii) the classifier has to be adjacent to its legal governor

### 4.3.3 The unsolved problems in ditransitive clauses

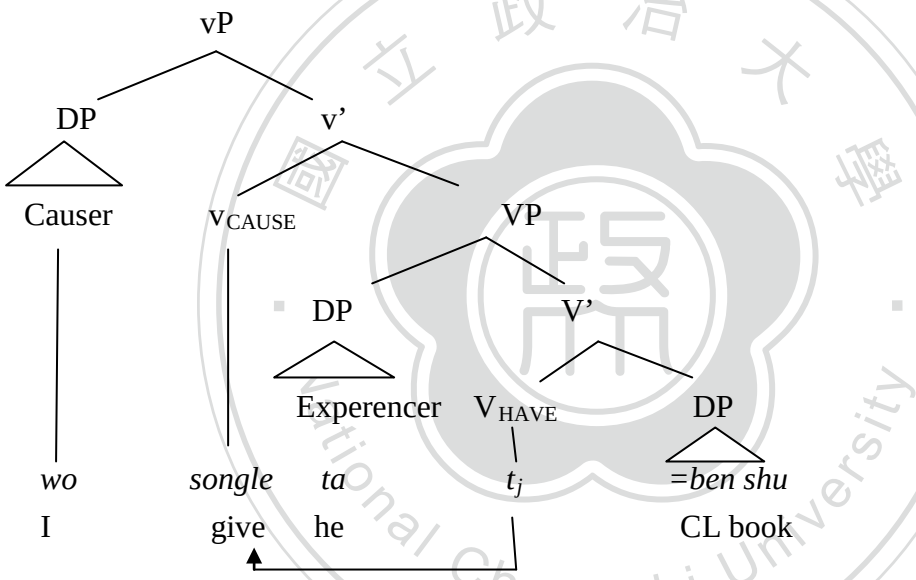
If the constraints for the clitic account I propose in last section is true, the example, which I present here as (71), should be predicted to be an ungrammatical sentence. Although the classifier *ben* in (68) is properly governed by V, it is not adjacent to its governor. However, the linguistic data tells us the opposite. Even without directly attaching to V, [*yi*=CL+N] can still be reduced to [CL+N].

(72) 我 送了 他 (一) 本 書
*wo song-le ta yi ben shu*
I give-ASP he one CL book
'I gave him a book.'

Here I would like to adopt the VP shell analysis for the ditransitive structure. Many studies related to transformational grammar have agreement on this analysis (Oehrle 1976, Harley 2002), and Cheng (1999) adopts this analysis on Chinese ditransitive structure as well. Huang, Li and Li (2009) extend this analysis to two kinds of ditransitive structures, namely, 3 place unaccusative series and 3 place unergative series. The concept is quite simple, the ditransitive verb *song* in (71) is composed of a light verb CAUSE and a real verb HAVE. Under this analysis, the

sentence “I gave him a book” equals to the sentence “I made him have a book.” The subject “I” is the causer, and “him” an experiencer. The verb *gei* offer an accusative case to the direct object “a book” , and then moves from the real verb position to the light verb position to give an accusative case to the indirect object “I”, as shown below.

(73) VP shell analysis for (71)




In (72), the classifier *ben* is properly govern by the verb in V position, although the verb moves out and leaves a trace. This accounts for the grammaticality of (72) that the classifier in [CL+N] is lexically governed and is adjacent to its governor.

It seems that VP shell analysis provides a solution to account for (70). But what about (73)? (72) is also a ditransitve structure; the only difference between (71) and (73) is that the direct object in (71) is a pronoun, while the direct object in (73) is a

noun phrase. If VP shell analysis predicts (71) to be grammatical, (73) should also be grammatical. Yet obviously, *yi* in indirect object cannot be omitted. I will leave this issue to the next section.

(74) 我 送了 (一) 個 朋友 *(一) 本 書
*wo song-le yi ge pongyou yi ben shu*
I give-ASP one CL friend one CL book
'I give a friend a book.'

### 4.3.4 The phonological constraints on the hosts and the classifier

The proposed constraints and VP shell analysis I adopt above seem to capture the properties of classifiers in [CL+N] have. However, there are still some issues remain unsolved, and one of them is related to phonology. So far I have discussed the syntactic constraints on the preceding elements of indefinite or quantity-denoting [CL+N]. But remember as I suggest earlier, clitics also have phonological subcategorizations on the hosts they cliticize. As noted in previous examples, classifiers in indefinite or quantity-denoting [CL+N] are sensitive to the number of syllables the hosts have. The classifier in (73) shows a preference for monosyllabic V rather than a disyllable V.

(75) a. 我 買了 (一) 張 票
*wo mai-le yi zhang piao*
I buy-ASP one CL ticket
'I bought a ticket.'

b. 我 購買了 *(一) 張 票
*wo goumai-le yi zhang piao*
I buy-ASP one CL ticket
'I bought a ticket.'

The unsolved ditransitive structure in last section also suggests that classifiers in [CL+N] are sensitive to the number of syllables the preceding element have. See the contrasts in (75).

(76) a. 我 送了 他 本 書
*wo song-le ta ben shu*
I give-ASP he CL book
'I gave him a book.'

? b. 我 送了 張三 本 書
*wo song-le Zhangsan ben shu*
I give-ASP Zhangsan CL book
'I gave Zhangsan a book.'

*c. 我 送了 張三 和 李四 本 書
*wo song-le Zhangsan han Lisi ben shu*
I give-ASP Zhangsan and Lisi CL book
'I gave Zhangsan and Lisi a book.'

(75a), (75b),and (75c) indicate that more syllables the indirect object have, the more it is not accepted as grammatical by Chinese native speakers. It seems that classifiers in indefinite or quantity-denoting [CL+N] have a preference for a monosyllabic host rather than a disyllabic host. This explains why [CL+N] never appears after the disyllabic preposition *guanyu* 'about' and the disyllabic verb such as *goumai* 'to buy'.

Another interesting point concerning phonological constraints in [CL+N] is that

the preference for monosyllabic elements also reflects on the classifier itself. Compare (76a) and (76b) below.

(77) *a* .我 買了 (一) 箱 蘋果

*wo mai-le yi xiang pingguo*

I buy-ASP one M apples

'I bought a box of apples.'

**b.* 我 買了 *(一) 箱子 蘋果

*wo mai-le yi xiangzi pingguo*

I buy-ASP one M apple

'I bought a box of apples.'

Since *xiang* and *xiangzi* represent exactly the same meaning 'box' in Mandarin Chinese, the only difference between the two is the number of syllables. This fact suggests that classifiers in [CL+N] have a phonological constraint, and this phonological constraint, at first glance, seems to be the number of syllables, on the hosts and also on classifiers themselves.

However, if the phonological constraint concerns to the number of syllables, it fails to explain the examples below.

(78) a. 我 看了 本 書

*wo kan-le ben shu*

I see-ASP CL book

'I read a book.'

b. *我　看過　　本 書
*wo kan-guo ben shu*
I see-EXP CL book
'I have seen a book.'

c. 我 看著　　個 女孩
*wo kan-zhe ge nuhai*
I look-ASP CL girl
'I am looking at a girl.'

Both the aspect marker *le*, *zhe* and the experience marker *guo* are monosyllabic, but for Mandarin Chinese native speakers or according to the language use I have found on the internet or the corpus, V-*le* structure such as (77a) and V-*zhe* structure like (77c) are preferred. The phonological constraint related to number of syllables of the classifier wrongly predicts people's less preference for V-*guo*.

Despite the discovery of the phonological constraint from the above examples, I later found that the smaller prosodic weight unit in phonology was ignored, i.e. the MORA. According to Lin (2007), a heavy syllable has two moras, while a light syllable has only one. Tone in Mandarin Chinese is not an inherent vowel feature but is associated with a tone bearing unit. The tone bearing unit in Chinese can be proposed to be a syllable, a rime or a mora (Lin 2007: 91). The most interesting thing mentioned by Lin (2007: 98) is that she claims that the neutral tone in standard Chinese appears in an unstressed short syllable. According to her earlier definition, an unstressed short syllable is a light syllable, and thus it bears only one mora.

Extended from Lin's (2007) argument, I make some adjustments to my phonological constraints above. The phonological constraints here are, first, as a clitic, the classifier cannot attach to the preceding element which has more than three moras. This explains why monosyllabic phrases or aspect marker V-*le* and V-*zhe* structures are preferred. *Le* and *zhe* are neutral tones, and thus together with the preceding verbs, V-*le* and V-*zhe* structures only have three moras. Other monosyllabic phrases such as V-*guo*, or disyllabic phrases (such as example 74b) bear more than three moras, therefore they are less preferred to occur before [CL+N].

The second phonological restriction also refers to the weight of the tone bearing unit. I argue that the classifier itself cannot bear more than two moras. Consequently, classifiers appearing in [CL+N] in Mandarin Chinese disallow being disyllabic. Example (75b) exactly confirms my argument.



**4.3.5 [CL+N] in distransitive structures**

So far we discussed the occurrences of [CL+N] in ditransitive structures. The former two phonological constraints do not tell the differences between (79a) and (79b) since both of them have more than three moras between the classifiers *ben* and their hosts *songle*.

(79) a. 我 送了 他 (一) 本 書
*wo song-le ta yi ben shu*
I give-ASP he one CL book
'I gave him a book.'

b. 我 送了 (一) 個 朋友 *(一) 本 書
*wo song-le yi ge pongyou yi ben shu*
I give-ASP one CL friend one CL book
'I gave a friend a book.'

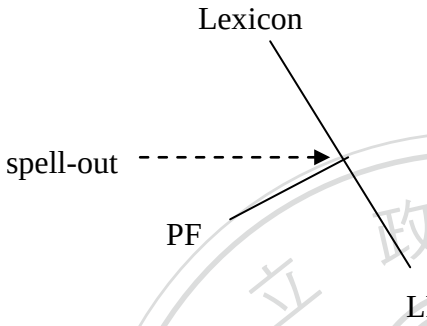
c. 我 送了 (一) 本 書 給 (一) 個 朋友
*wo song-le yi ben shu gei yi ge pongyou*
'I gave a book to a friend.'

In previous sections, I have proposed that I adopt the VP shell analysis by Huang, Li and Li (2009) for the ditransitive structures in my thesis. Under the analysis, the V head *song* 'to give' is based-generated in lower VP and later moves up to upper vP. In other words, the verb *song* 'to give' is a syntactically legal host for the classifier *ben* in direct object position in both (78a) and (78b). The grammaticality in (78a) instead of (78b) indicates that there must be a certain mechanism beyond syntax.

Chomsky (1993) proposes a model concerning the operation of languages. He assumes that when people speak, first they choose words, which consist of features from the lexicon. The derivation of a sentence is the function of the syntactic component, which connects the elements selected from the lexicon to the two interface levels. The derivational process combines lexical elements and makes them interpreted by the articulatory and conceptual components. Then the representation

will be delivered to the conceptual component via LF. The PF representation serves as an intermediate stage of the derivation, and all the syntactic derivations are done before the utterances be spelled out, as exemplified in (80).

(80) The derivational process according to Chomsky (1993)




Based on this model, verb *song* plays the role of a legal host for the classifier *ben*, It is base-generated in lower VP and then move to higher vP. However, when all syntactic derivations are done and the sentence is to be pronounced, the spell-out filter finds that the local host for the classifier *ben* has lost. A clitic without a host is not able to be pronounced, thus it is forced to cling to a nearest host. This host, I claim, it the indirect object. However, the new host still has to obey the phonological constraint that it cannot bear more than three moras. In (78a), the pronoun *ta* only carries two moras, thus it becomes the new legal host for *ben*. On the other hand, the NP *yi ge pongyou* in (78b) has more than three moras, and therefore is blocked to be the legal host for *ben*.

The grammaticality of (78c) is due to the occurrences of the preposition *gei*.

Both the preposition *gei* and the verb *song* do not violate the syntactic constraint, so they serve as the syntactically legal hosts for the classifiers in direct position and indirect object position. When the syntactic derivations are done and the sentences are sent to spell-out filter, both the hosts pass the filter since they have less than three moras.

Note that the allowance of the classifier attaching to the indirect object for the lost of the original host suggests that NP is also a legal host. Therefore, in addition to the syntactically legal hosts I have mentioned before, VP, PP, DP, and NumP, NP serves as a legal governor to classifiers as well. To make my analysis simpler, I argue that the host of the classifier in Mandarin either belongs to verbal categories or nominal categories. Besides, the host in these two categories also has to have an overt c-commanding head which c-commands the classifier. This rules out the possibility of AdjP being the host for its identity of being an adjunct.

To briefly conclude, here I propose the third constraint for the clitic analysis.

(81) The bare classifier phrase [CL+N] can occur in indefinite or quantity-denoting positions if
(i) the classifier in [CL+N] is lexically governed by the proper governor,
(ii) the classifier has to be adjacent to its legal governor,
(iii) and both the classifier and its host must observe the phonological constraints

### 4.3.6 Conclusion of this section

In this section, first I briefly introduce the phenomenology of clitics and some of

the properties of clitics, pointing out the fact that classifiers in [CL+N] have many of these properties. Phonologically, classifiers in [CL+N] never bear accents, and most of the hosts they select follow the maximal mora number restriction. Syntactically, classifiers in [CL+N] in Mandarin are free, but have constraints on the hosts they attach to. The host must have an overt c-commanding head and must properly govern the classifier and be adjacent to the classifier. Morphologically, classifiers in Mandarin do not occur in isolation, and this is similar to clitics since clitics never appear independently. Therefore, I adopt the clitic account and treat classifiers in Mandarin Chinese as clitics.

I also propose the constraints classifiers in [CL+N] have on the host they clicitize. Here I would like to restate those constraints.

(82) The bare classifier phrase [CL+N] can occur in indefinite or quantity-denoting positions if
(i) the classifier in [CL+N] is lexically governed by the proper governor,
(ii) the classifier has to be adjacent to its legal governor.
(iii) and both the classifier and its hosts a must obey the phonological constraints

**4.4 The remained unsolvable**

So far the proposed clitic account has covered most of the counterexamples I describe in last chapter. However, there are still two counterexamples I haven't dealt with, namely, the contrastive context and the ditransitive classifiers.

In last chapter, I suggest that [*yi*=CL+N] can have *yi* deleted and becomes [CL+N] in postverbal quantity-denoting positions. However, when [*yi*=CL+N] is in contrastive contexts, *yi* seldom can be deleted. In this section, these special contexts are discussed.

### 4.4.1 The prohibition of [CL+N] in contrastive contexts

There are three types of contrastive contexts which contrast numerals, classifiers, or NPs, respectively, as shown below.

(83) 我 買了 一 顆 蘋果， 不 是 三 顆 蘋果 (numerals)
*wo mai-le yi ke pingguo bu shi san ke pingguo*
I buy-ASP one CL apple not be three CL apple
'I bought one apple but not three apples.'

(84) 我 買了 一 顆 蘋果，不 是 一 箱 蘋果 (classifiers)
*wo mai-le yi ke pingguo bu shi yi xiang pingguo*
I buy-ASP one CL apple not be one M apple
'I bought one apple but not a box of apples.'

(85) 我 買了 一 顆 蘋果，不 是 一 顆 梨子 (NPs)
*wo mai-le yi ke pingguo bu shi yi ke lizi*
I buy-ASP one CL apple not be one CL pear
'I bought an apple but not a pear.'

In fact, the different focus of the referents in three contrastive contexts leads to different results. It is found that [*yi*=CL+N] in (84) can undergo *yi* omission.

(86) 我 買了 *(一) 顆 蘋果， 不 是 三 顆 蘋果 (numerals)
*wo mai-le yi ke pingguo bu shi san ke pingguo*
I buy-ASP one CL apple not be three CL apple
'I bought one apple but not three apples.'

(87) 我 買了 *(一) 顆 蘋果，不 是 *(一)箱 蘋果 (classifiers)
*wo mai-le yi ke pingguo bu shi yi xiang pingguo*
I buy-ASP one CL apple not be one M apple
'I bought one apple but not a box of apples.'

(88) 我 買了 (一) 顆 蘋果，不 是 (一) 顆 梨子 (NPs)
*wo mai-le yi ke pingguo bu shi yi ke lizi*
I buy-ASP one CL apple not be one CL pear
'I bought an apple but not a pear.'

This indicates that only when NP serves as the focus of contrasted referents can [CL+N] appear in postverbal positions. In above sentences, all classifiers are properly governed by their legal governors (Vs), and all their hosts follow the phonological constraints the classifiers have on them. Under the clitic account, these sentences should predict to be grammatical. However, the examples show just the opposite; only (87) is grammatical.

People put stress on the contrastive focus when they contrast things. That is to say, the contrastive focus usually receives stress in a sentence. However, a stressed phrase usually cannot be suppressed. This explains the ungrammaticality of (86) since the numeral is the contrastive. In (87), the classifier and the measure words are the contrastive focus, and thus they are stressed. Yet, classifiers in classifier phrases [CL+N] are never stressed. Once the contrastive focus becomes [CL+N], it is

impossible for the classifier to receive stress. In (88), NP serves as the contrastive focus, and it is still stressed even when the numeral is reduced. Therefore, the prohibition of [CL+N] in these three contrastive contexts is related to stress.

### 4.4.2 The prohibition of disyllabic classifiers in [CL+N] structure

The center of my thesis is concerning viewing classifiers in Mandarin Chinese as clitics for many properties they share with clitics. Being a clitic, Mandarin classifier has certain constraints on its host, and those constraints include syntax, morphology, and phonology. Phonologically, as I argue in the previous sections, all classifiers in [CL+N] may not bear more than two moras, and their hosts may not carry more than three moras. But until now only monosyllabic classifiers are discussed. In Mandarin Chinese, there exist ditransitive classifiers. Though blocked in bare classifier phrases, they are allowed to appear following numerals in [Num=CL+N], as below examples show.

(89) a. 我　買了　*(一)公斤　　蘋果
*wo mai-le　yi gongjin pingguo*
I　buy-ASP one M　apple
'I bought one kilogram of apples.'

b. 他　吃了　*(一)大顆　　蘋果
*ta　chi-le　yi dake　pingguo*
he　eat-ASP one big-M　apple
'He ate one big apple.'

(90) a. 我 送了 他 (一)公斤 蘋果
*wo song-le ta yi gongjin pingguo*
I give-ASP he one kilogram apple
'I gave him one kilogram of apples.'

b. 我 送了 他 *(一)大顆 蘋果
*wo song-le ta yi dake pingguo*
I give he one big-M apple
'I gave him a big apple.'

In (89) and (90), both *gongjin* 'kilo' and *dake* 'big and round shaped' can co-occur with numerals, just as monosyllabic classifiers do. Yet they are barred from omitting the numeral *yi*. Despite their difference from monosyllabic clitics, they cannot be treated as words in that they cannot stand alone but have to cling to a host, in this case, a numeral. Therefore, I argue that there are two kinds of classifier clitics in Mandarin, namely, monosyllabic and disyllabic. In other words, both monosyllabic and disyllabic classifiers are cltics; somehow they differ in the selection of their hosts. The hosts of monosyllabic ones have to follow the syntactic, morphologic and phonological constraints as proposed earlier. For disyllabic classifiers, determiners, nouns and numerals are the syntactic categories they can attach to; and these syntactic categories obviously exclude verbal categories. To make my analysis simpler and more clear, I argue that monosyllabic classifiers and disyllabic classifiers in Mandarin are both clitics yet have different subcategorizations in terms of syntax, phonology and morphology. Monosyllabic classifiers attach to syntactic categories under VP

scope which c-command classifiers, for example, VP, PP, NumP, DP, NP or even ASP; whereas disyllabic classifiers attach to a relatively limited syntactic categories under DP scope, for example, quantity denoting numerals in NumP or infinite numerals in DP.

The possible explanation for monosyllabic classifiers and disyllabic classifiers' different behavior in syntactic subacategorization is related to syntactic diffusion. The original idea of syntactic diffusion came from Wang's (1969) lexical diffusion. Hsieh (1989) extended the two most important concepts of phonology that first, changes affecting the grammar take effects gradually. Second, vatiations of a grammatical construction are due to the interaction of competing rules. Here, I argue that disyllabic classifiers behaves differently from monosyllabic classifiers because compared to monosyllabic classifiers, disyllabic classifiers are rather new. According to Hong (2004) and Her (2010), monosyllabic classifiers appeared in pre Qing dynasty (around 500 BC), whereas disyllabic classifiers appeared at Five dynasty and Ten kingdoms (around 907AD-979AD). The idea is that when the new kind of classifiers (disyllabic classifiers) appears, it does not immediately behave like existing ones (monosyllabic classifiers). The diffusion is on-going, perhaps disyllabic classifiers will behave similaryly to monosyllabic ones. Somehow according to the language use today, the diffusion is not finished yet.

A more interesting fact is also found related to the phonological constraints monosyllabic classifiers and disyllabic classifiers both have on their hosts. Both classifier groups allow their host to bear more than three moras when the host is the numeral. In other words, both monosyllabic classifiers and disyllabic classifiers can attach to numerals bearing more than three moras. Examples are illustrated below.

(91) a. 三本　　書
*san ban*　*shu*
three C　book
'3 books.'

b. 三　千　六　百　六　十 六 本 書
*san*　*qian*　*lu*　*bai*　*lu*　*shi lu ben shu*
three thousand six hundred six ten six C book
'3,666 books.'

(92) a. 三　公斤　　糖
*san gongjin*　*tang*
three kilogram sugar
'3 kilograms of sugar.'

b. 三　千　　六　百　六　十六　公斤　　糖
*san*　*qian*　*lu*　*bai*　*lu*　*shi lu*　*gongjin tang*
three thousand　six hundred six ten six　M　sugar
'3,666 kilograms of sugar.'

Earlier, I have proposed my phonological constraints for monosyllabic classifiers that the hosts of monosyllabic classifiers cannot bear more than three moras, as (91a) shows. Somehow in (91b), the numeral which the monosyllabic classifier *ben* attaches to has more than three moras. Under my current analysis, (90b) seems to be

out of my prediction.

Traditionally, numerals are viewed as words taken from the lexicon. They are arranged in order and formed in the lexicon, and then have certain lexical intergrity in phrasal level. Yet there might be a chance that numerals are picked from lexicon independenly and are arranged and formed in phrasal level. That way, both the monosyllabic classifier and the disyllabic classifier attach to the rightmost digit, in (91b) and (92b), *lu* 'six'. And that certainly remains my analysis clear and simple because the rightmost digit of numerals never bears more than one syllable (2 moras). The possibility of numerals in Mandarin Chinese having their internal structures in phrasal level thus leaves an issue to be discussed in the future.

**4.5 The interpretation of 'one' in the bare classifier phrase [CL+N]**

Until now I have pointed out the advantages for applying a clitic account for classifiers of bare classifier phrases [CL+N] in Mandarin, and I also propose the constraints classifiers have on their hosts. But one question which remains uncertain and has never been discussed before is that why does the value "one" exist in bare classifier phrase? In other words, why Mandarin Chinese native speakers still get the meaning of *1* after *yi* is omitted in [*yi*=CL+N] structure?

### 4.5.1 The redundant *1* value of Chinese classifiers

Her and Hsieh (2010) has made a distinction between classifiers and measure words in Taiwan Mandarin based on several accurate and reliable tests. Semantically, Her and Hsieh (2010) have observed that classifiers are semantically null and measure words are semantically null in [Num C/M N], and that stacking of Num-C/M is possible for measures words but not for classifiers. Classifiers and measure words also differ in adjectival modification. Measure words block adjectival modification, while classifiers do not. Thus, Her (2010) points out that metaphorically measure words are opaque yet classifiers are transparent.

Her and Hsieh (2010) also claim that classifiers specify an essential property of the noun in [Num=CL+N]. Measure words, on the other hand, denote accidental properties of the noun in [Num=CL+N]. Their arguments again confirm Adams and Conklin's (1973: 2) insight that classifiers qualify the head noun while measure words quantify it, and echo W. Li's (2000: 1777) statement that classifiers are semantically redundant. Her (2010) extends the semantic characterization made by Her and Hsieh (2010) above and has an insight on the mathematic value of classifiers and measure. Her (2010) states that the distinctions between classifiers and measure words can be explained in terms of the set theory that classifiers never contribute the semantic value nouns already have, while measure words contribute semantic properties to nouns

does not have. Her's (2010) argument has solved the problems and has explained the reason why modification or quantification on classifiers is also on nouns but which on measure words does not extend to nouns.

Her (2010) also discusses the mathematical properties of classifiers and measure words in Taiwan Mandarin. Inspired by the concepts of the parceler (Landman 2004), the divider (Borer 2005), and the multiplicand (Au Yeung 2005, 2007), Her (2010) argued that both classifiers and measure words in Taiwan Mandarin are multiplicands which link numerals and nouns. Take *san da jidan* or three dozen eggs for example, both are in the equation 3 × 12 = 36, 12 is the multiplicand, denoting the number in a group, and 3 is the multiplier, referring to the number of groups. An important concept mentioned by Her (2010) is that when multiplicand is one, *times one* (or *cheng yi* in Chinese) is redundant, as n × 1 = n. Her (2010) further argues that all languages with a multiplication-based number system have the same structure of [Num ×1 N], where ×1 can be silent in some languages (such as Archaic Chinese), expressed as classifiers in classifier languages (e.g., modern Chinese), or appear as number affixes on Nouns in inflectional languages (e.g., English).

Extended from the redundant *1* concept, Her (2010) claims that Chinese classifier system exactly reflects this linguistic phenomenon. Classifiers normally are required in Chinese. However, they are allowed to be absent in certain literary contexts, which

indicates classifiers contribute no additional semantic content that the head nouns already have. The absence of classifier is especially common in Beijing Mandarin (Her 2010). On the contrary, measure words like *da* 'dozen' and *gongjin* 'kilo' in each contributes crucial information in the equations respectively, and therefore cannot be optional nor silent; they have a value other than 1.

Her (2010) proposes that, if classifiers or measure words in Mandarin are to be interpreted as having a mathematical value, the only possible mathematical function which links numerals and classifiers/measure words is multiplication. As a multiplicand, the value of a classifier is necessarily *1*. This explains why a classifier in Mandarin Chinese is semantically redundant in [Num=CL+N]. Measure words, on the other hand, are semantically substantive in this construction. Therefore, mathematically measure words must not have a value that is necessarily *1*. Her (2010) further provides a formula for this,

(93) Her's (2010) Formula for C/M distinction
[Num $\underline{X}$ N] = [Num×$\underline{n}$ N], where X=C *iff n=1*, otherwise X=M.

Classifiers then have the mathematical value, *1*, and measure words express all other, indeed infinite, possible values (Her 2010). This explains why classifiers belong to a closed set, yet measure words an open set. However, classifiers and measure words, although differing in their mathematical value, occupy the same syntactic slot in [Num=CL +N]. Therefore, they share the function as a divider (Borer 2005) or

parceler (Landman 2007) for the head noun.

Treating classifiers in Mandarin as *times one* offers an explanation for the omission of classifier in [Num+CL+N] in some daily conversations. The omission is allowed because Chinese classifier as *times one* is mathematically vacuous, and semantically it merely serves to highlight a certain feature that the noun already has (Her 2010).

### 4.5.2 The redundant *1* value of numerals

Since n × 1 = n, 1 can be omitted. Likewise, 1 × n= n, so 1 here can also be omitted. In other words, 1 can be omitted whether it is the multiplicand or multiplier. Her (2010) views both classifiers and measure words in Chinese as multiplicands, many syntactic are used to support classifiers being *one*. Similarly, the multiplier would have the chance to be *1* or not *1*. Inspired by Her's (2010) insight into the omission of redundant *1*, here I argue that when the numeral in [Num=CL+N] has the value of *1*, it can also be omitted; yet, when the numeral is not *1*, it cannot be omitted because it is not redundant. In other words, the only value people get from the omitted form [CL+N] in Mandarin Chinese is *1* since it is the only value allowed to be deleted.

The omission of numerals occurs not only in Mandarin Chinese or Cantonese.

Some languages have a more restricted language system in terms of numeral omission. Take Maonan, a Kam-Sui language in the Tai-Kadai family, spoken in Gunagxi, China, for example.

(94) a. *ai*$^{1}$ *zən*$^{1}$ *(dɛ u*$^{231}$*)*
CL person 1
'1 person'

b.**dɛ u*$^{231}$ *ai*$^{1}$ *zən*$^{1}$
1 CL person
'(intended) 1 person'

(95) a. *ja*$^{42}$*/sa* *ˀ mai*$^{1}$ *zən*$^{1}$
2/3 CL person
'2/3 persons'

b. **ai*$^{1}$ *zən*$^{1}$ *ja*$^{42}$*/sa* *ˀ m*
CL person two/three
'(intended) 2/3 persons'

Unlike Mandarin Chinese, the omission of the numeral *1* in Maonan is not optional. (95) and (95) both show that in Maonan, when the numeral in [Num=CL+N] equals *1*, the numeral must be omitted; yet when it is not *1*, it has to occur, otherwise the sentence would be ungrammatical. The language use in Maonan strongly supports my argument that the redundant *1* can be omitted not only when it is a multiplicand but also when it is a multiplier.

To conclude this section, Her's (2010) view that [Num=CL+N] taken as multiplication with a simple mathematical value is of great insight. As a multiplicand, it is either *1* or not *1*. Classifiers thus have the mathematical value, *1*, and measure words express all other possible values. And when the value is *1*, it can be omitted.

Then I propose that the same rule applies to the multiplier, that is, the numeral in [Num=CL+N] structure. When the value of numeral equals *1*, it can also be omitted. Evidence comes not only from Mandarin Chinese or Cantonese but from a more restricted language such as Maonan that the numeral *must* be deleted in [Num=CL +N] form when it is *1*.

**4.6 Conclusion of the chapter**

All the clitic-like properties classifiers have and the proposed constraints solve the previously unsolvable. Previous analyses only explain the occurrence of [CL+N] in some contexts but cannot correctly predict the positions for [CL+N] to occur. A clitic analysis, on the other hand, covers the insufficiency of the previous analyses. Consequently, I argue that it is not the indefiniteness nor quantity-denoting expression but rather the syntactic status of the classifier that serves as the factor which decides the occurrence of the bare classifier phrase [CL+N] in Mandarin Chinese.

In this chapter, I also discuss the remaining *1* after the numeral *yi* 'one' is deleted from [Num=CL+N]. The idea is inspired by Her's (2010) insights into viewing [Num=CL+N] as multiplication and the omission of redundant *1*. Extended from Her's (2010) argument, I suggest that not only multiplicands, which are Chinese classifiers and measure words in [Num=CL+N], have the chance of being *1*, but the

multiplier, the numeral in the same structure, could be *1*. When the value of the numeral equals *1*, it can be deleted for its redundancy. This explains why *1* is the only value native speakers get when *yi* is omitted; *1* is the only value which is allowed to be deleted.

# Chapter 5

# Conclusion

The omission of *yi* 'one' in [*yi*=CL+N] in Mandarin Chinese has caught much attention. To begin with, I outline the controversial issue of the bare classifier phrase [CL+N]. First, the issue concerns to whether [*yi*=CL+N] and [CL+N] belong to distinct structures or not. Because the two structures have a lot of overlapping distributions (for example, postverbal positions), some works claim that [*yi*=CL+N] and [CL+N] belong to distinct structures since the only interpretation of [CL+N] is indefinite and nonspecific (Cheng and Sybesma 1999); yet more studies suggest that bare classifier phrases [CL+N] are the phonological reduction of numeral classifier phrases [Num=CL+N] when the numeral is *yi* 'one' (Lu 1990, Chen 2003, 2004, Her 2010). In my opinion, the latter is preferred since the contexts that [CL+N] in Mandarin Chinese can be interpreted both definite and indefinite are found, there is no reason to argue that [CL+N] and [*yi*=CL+N] belong to different structures. Furthermore, the only value native speakers get from [CL+N] is *1*, but not other numbers. Claiming [CL+N] and [*yi*=CL+N] being different structures cannot explain

why the remaining *1* value people get in the bare classifier phrase[CL+N].

Second, I deal with the discrepancies related to the distribution of bare classifier phrases [CL+N] in Mandarin Chinese. Compared with [Num=CL+N], the occurrences of [CL+N] are more limited. Various explanations are provided for the prohibition of [CL+N] in certain contexts. Cheng and Sybesma (1999), who hold the opinion that [CL+N] and [*yi*=CL+N] being two different structures, state that the prohibition of [CL+N] is related to boundedness and indefiniteness. Lu (1990) and Chen (2004), on the other hand, suggest that only when [*yi*=CL+N] occurs in indefinite position, being specific or nonspecific, can [*yi*=CL+N] be reduced to [CL+N].

Two assumptions are made under Lu (1990) and Chen's (2004) analysis. First, [CL+N] never appear in definite positions such as subject and topic positions. Second, all indefinite [*yi*=CL+N] can be reduced to [CL+N]. However, counterexamples for the second assumption are easily found in Mandarin Chinese that *yi* in [*yi*+CL+N] cannot be omitted in some indefinite positions. In addition, some [*yi*+CL+N] which are not interpreted as indefinite also undergo numeral omission and become [CL+N]. All these facts show that the previous accounts gives explanations for the occurrences of [CL+N] rather than predict the occurrences of [CL+N].

The above counterexamples raise my curiosity. What might decide the occurrences of [CL+N] instead of indefiniteness? Yang (2002) suggests the classifiers

in Mandarin Chinese be clitics. He posits a morpho-syntactic structure for a Mandarin Chinese full NP with a classifier, where the combination of the numeral and the classifier is assumed to be a morphological complex rather than two independent words. He also uses Zwicky and Pullum's (1983) six criteria of distinguishing affixes and clitics to examine the classifier in Mandarin Chinese by comparing to clitics in English. Besides getting inspiration from Yang's (2002) account, I have also observed that classifiers in Mandarin share many properties with clitics in syntax, phonology, and morphology; these properties seem to provide a better solution for the prohibition of [CL+N] in certain contexts. Therefore, extending Yang's (2002) clitic account, Ihave made several adjustments and have provided with more detailed evidence.

The clitic account indeed solves most problems left by previous studies. However, when [*yi*=CL+N] is in contrastive contexts, *yi* seldom can be deleted. For the prohibition of *yi* omission in contrastive contexts, I argue that it is due to the stress people put on the contrastive focus. The contrastive focus usually receives stress in a sentence. However, a stressed phrase usually cannot be suppressed. This explains why *yi* is unable to be omitted when it serves as a contrastive focus.

Another issue concerning the clitic account is that although disyllabic classifiers cannot appear in the form of bare classifier phrases, they are viewed as clitics since they do not appear alone. Therefore, I argue that both monosyllabic and disyllabic

classifiers are clitics; monosyllabic classifiers have a rather free syntactic subcategorization on their hosts, whereas disyllabic classifiers have a more limited syntactic categorization on their hosts. The explanation for two kinds of classifiers have different syntactic behavior is due to syntactic diffusion. Compared with monosyllabic classifiers, disyllabic classifiers appear rather late. I suggest that the syntactic inffusion is on-going that so that disyllabic classifiers do not immediately behave like the existing ones (the monosyllabic classifiers).

Finally, I discuss the value *1* from the bare classifier phrase [CL+N] by applying Her's (2010) viewpoint on treating [Num+CL/M+N] as multiplication. Since the multiplicand, which are classifiers claimed by Her (2010), has the chance to be 1 and be deleted, I argue that the numeral, being the multiplier, can also be deleted when it equals to *1*. The language use in a more restricted language, Maonan, has been found to support my argument. To sum up, the linguistic evidence, be it Mandarin internal or cross-linguistic, all well supports my argument that the occurrence of [CL+N] is not due to the indefiniteness or boundness but because the identity of the classifier is a clitic and it needs to be governed by a proper host.

**References:**


Adams, Karen. 1986. Numeral classifiers in Austroasiatic. *Noun Classes and Categorization*. ed. by C. Craig, 241-62. Amsterdam: John Benjamins.

Aikhenvald, Y. Alexandra. 2000. *Classifiers: A typology of Noun Categorization Devices.* Oxford and New York: Oxford University Press.

Anderson, Stephen R. 2005. *Aspects of the Theory of Clitics*. Oxford University Press.

Bošković, Željko. 2000. Second position cliticisation: syntax and/or phonology? *Clitic Phenomena in European Languages*, ed. by F. Beukema and M. den Dikken. 71-119. Amsterdam: John Benjamins.

Chao, Yuen-Ren. 1968. *A grammar of spoken Chinese*. Berkely: University of California Press.

Chen, Ping. 2003. Indefinite determiner introducing definite referent: A special use of yi 'one' + classifier in Chinese. *Lingua* 113.12: 1169-1184.

Chen, Ping. 2004. Identifiability and definiteness in Chinese. *Linguistics* 42.6: 1129-1184

Cheng, Lisa and Rint Sybesma.1998. *Yi-wan Tang, Yi-ge Tang*: classifiers and massifiers. *The Tsing Hua Journal of Chinese Studies* 28.3:385-412.

Cheng, Lisa and Rint Sybesma. 1999. Bare and not so-bare nouns and the structure of NP. *Linguistic Inquiry* 30.4:509-542.

Cheng, Lisa and Rint, Sybesma. 2005. Classifiers in four varieties of Chinese. *The Oxford Handbook of Comparative Syntax*. Oxford: Oxford University Press.

Chomsky, Naom. 1995. *The Minimalist Program.* Cambridge, Mass.: MIT Press.

Duanmu, San. 2000. *The Phonology of Standard Chinese.* Oxford: Oxford University Press.

Duanmu, San. 2001. Stress in Chinese. *Chinese Phonology in Generative Grammar*, ed. by De Bao Xu. 117-138. San Diego: Academic Press.

Frawley, William. 1992. *Linguistic Semantics*. Hillsdale, NJ, Hove & London: Lawrence Erlbaum.

Halpern, Aaron. 1995. *On the Placement and Morphology of Clitics*. Standford: CSLI Publications.

Harley, Heidi. 2003. Possession and the double object construction. *Linguistic Variation Yearbook* 2:31-70.

Heine, Bernd. 1997. *Cognitive Foundations of Grammar*. Oxford: Oxford University Press.

Her, One-Soon and Chen-Tien Hsieh. 2010. On the semantic distinction between classifiers and measure words in Chinese. *Language and Linguistics* 10.2:357-419

----To appear. Distinguishing classifiers and measure words: A mathematical

perspective and implications. To appear in *Lingua*.

Hsieh, Miao-Ling. 2008. *The Internal Structure of Noun Phrases in Chinese*. Taiwan Journal of Linguistics: Book Series in Chinese Linguistics. No. 2. Taipei: Crane Publishing.

Huang, C.-T. James. 1982a. Move *wh* in a language without *wh-movement*. *The Linguistics Review* 1:369-416.

----1982b [1998]. Logical relations in Chinese and the theory of grammar. Doctoral dissertation, MIT; edited version published by Garland, New York, 1998.

----1987. Existential sentences in Chinese and (in)definiteness. *The Representation of (In)definiteness*, ed. by Eric Reuland and Alice ter Meulen, 226-253. Cambridge, Mass.: MIT Press.

Jakendoff, Ray. 1987. *Consciousness and the Computational Mind*. Cambridge: MIT Press.

Ji, Huimin. 2007. On the Syntax of Chinese Nominals. PhD Dissertation, the University of Georgia.

Klavans, Judith L. 1982. *Some Problems in a Theory of Clitics*. Bloomington: Indiana University Linguistics Club.

Klavans, Judith L. 1985. The independence of syntax and phonology in cliticization. *Language* 61:95-120.

Lakoff George. 1987. *Women, Fire and Dangerous Things*: What Categories Reveal about the Mind. Chicago: University of Chicago Press.

Li, Audrey. 1996. Definite and indefinite existential constructions. *Studies in Linguistics Sciences* 26:175-191.

Li, Audrey. 1998. Argument determiner phrases and number phrases. *Linguistic Inquiry* 29:4, 693-702.

Li, Charles and Sandra Thompson. 1981. *Mandarin Chinese: A Functional Reference Grammar*. Berkeley: University of California Press.

Lin, Yen-Hwei. 2007. *The Sounds of Chinese*. Cambridge: Cambridge University Press.

Lu, Shuxiang 1990 [1944]. Ge zi de yingyong fanwei, fu lun danweici qian yi zi de tuoluo[Scope of the uses of ge and omission of yi in front of classifiers]. *Lu Shuxiang Wenji* [*Collected Works of Lu Shuxiang*]. Vol. 2, 144-175. Beijing: Shangwu Yinshuguan.

1990 [1948]. ba zi yongfa de yanjiu [Studies in the uses of ba]. *Lu Shuxiang Wenji*. [*Collected Works of Lu Shuxiang*]. Vol. 2, 176-199. Beijing: Shangwu Yinshuguan.

Lyons, Christopher. 1999. *Definiteness*. Cambridge: Cambridge University Press.

Lyons, John. 1977. *Semantics*. 2vols. Cambridge: Cambridge University Press.

Oehrle, Richard. T. 1976. *The Grammatical Status of the English Dative Alternation*. PhD Dissertation, MIT.

Roberts, Ian. 2010. *Agreement and Movement*. Cambridge, Mass.: MIT Press.

Sybesma, Rint. 1992. *Causatives and Accomplishments*: The case of Chinese *ba*. PhD Dissertation, HIL/Leiden University.

Tai, James, H-Y. and Fang-yi Chao. 1994. A semantic study of the classifier *zhang*. *Journal of Chinese Language Teachers Association* 31.3: 67-78.

Tai, James H-Y. and Lianqing Wang. 1990. A semantic study of the classifier *Taio*. *Journal of the Chinese Language Teachers Association* 25.1: 35-56.

Tang, Chih-Chen Jane. 1990a. A note on the DP analysis of Chinese noun phrases. *Linguistics* 28:337-354.

Tsai, W. –T. Dylan. 1995a. *On Econominizing A-bar Dependencies*. PhD Dissertation, MIT.

---- 1994b. On nomial islands and LF extraction in Chinese. *Nature Language and Linguistic Theory* 12:121-175.

----1996. Subject specificity, raising modals and extended mapping hypothesis. Paper presented at the Symposium on the Referential Properties of Noun Phrase, Los Angeles: City University of Southern California.

Yang, Rong. 2002. *Common nouns, Classifiers, and Quantification in Chinese*.

Rutgers, State University of New Jersey, Dissertation.

Yip, Chak-Lam Colum. 2008. Complicating the Oversimplification: Chinese Numeral Classifiers and True Measures. PhD Dissertation, Marjorie K.M.

Zwicky, Arnold M. 1985. Clitics and particles. *Language* 61,2: 283-305.

Zwicky, Arnold M. and Geoffrey K. Pullum. 1983. Cliticization vs. inflection: English *n't*, *Language* 59:502-13.

洪藝芳 (2003) ，敦煌社會經濟文書中的唐五代新興量詞研究。*敦煌學*，24: 83-114。

Taiwan Google: http://www.google.com.tw/