國立交通大學

外國語文學系外國文學與語言學碩士班

碩士論文

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On *Ge* in the V *ge* XP construction in Mandarin Chinese: A Syntactic and Semantic Analysis

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A Thesis

Submitted to Institute of Foreign Literatures and Linguistics
National Chiao Tung University
in Partial Fulfillment of the Requirements for the Degree of Master
in
Institute of Foreign Literatures and Linguistics
National Chiao Tung University

July, 2009
Hsinchu, Taiwan, Republic of China

中華民國九十八年七月

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摘　　要

本篇論文主要探討中文「個」字在「V 個 XP」結構的特殊用法，例如「吃個飯」、「吃個過癮」。首先，根據數量詞是否可以加入來判斷，該結構的「個」不能加入前置的數量詞，可視為與個體量詞的「個」不同，如果該假設成立，那麼「個」到底是什麼？「個」的出現對句子貢獻什麼語意？

本文中「個」字的句法分析，主要奠基於 Doetjes (1997)對量詞 (Quantification)的研究。「個」從表示確定量的量詞(classifier)轉為表示不定量的程度量詞(degree quantifier)，「個」可分析為一個帶有量詞結構(classifier construction)的程度量詞。此外，「個」是程度量詞的中心語(head)，選擇帶有名詞特性(nominal)的詞語，例如名詞及形容詞。

從語意的觀點而言，根據 Kennedy&McNally (2005) 對程度(degree)及範圍(scale)的定義，形容詞有其範圍。再根據 Doetjes (1997)的定義，名詞也可視為有範圍。「個」指的就是這範圍的最小值(minimal part)，因此才會有微小不重要(trivial)的語意出現。

總歸而言，本文主張中文「個」具有一致的句法表現及語意解釋，句法上是程度量詞，語意上是指賓語範圍的最小值。

關鍵字：中文，個，程度量詞，範圍

On *Ge* in the V *ge* XP construction in Mandarin Chinese:

A Syntactic and Semantic Analysis

Student: Wu, Chia-Fen Advisor: Dr. Lin, Jo-Wang

Institute of Foreign Literatures and Linguistics

ABSTRACT

This thesis studies the special usage of *ge* in the V *ge* XP construction, such as *chi ge fan* 'have a meal' and *chi ge gouyin* 'eat to one's heart's content,' and with particular focus on the interpretation of *ge*. Initially, since *ge* does not allow the preceding numerals, it is argued that *ge* is different from the generalized classifier *ge*, which individuates a single unit of nouns for counting. In other words, *ge* in the V ge XP does not function like an individual classifier. If such an account is correct, then what is *ge*? What kind of meaning does *ge* contribute to the V *ge* XP construction?

In this thesis, the assumption regarding the syntactic representation of *ge* is based on Doetjes' (1997) analysis of quantification and selection. I propose that *ge* is a degree quantifier (i.e., DQ), due to the facts that, like a DQ, *ge* gradually changes from a classifier denoting a specific quantity, or a unit, to a degree quantifier denoting an uncertainty quantity. Furthermore, I propose that *ge* is a head, selecting phrases composed of categories with [+N] feature, such as nouns and adjectives.

From the semantic point of view, based on the research of Kennedy and McNally (2005), adjectives have scales and degrees. According to Doetjes' (1997) definition, nouns also have scales. I then propose that each XP has its scale and *ge* indicates the minimal part on the scale of the XP, such as the degree scale of adjectives or the quantity scale of nouns. Thus, a trivial reading is derived.

This study concludes that *ge* is a degree quantifier selecting nominal arguments syntactically, and *ge* denotes the minimal part of arguments in the scale of degree or quantity semantically. The contribution of this study is to provide a unified syntactic and semantic analysis of *ge* in the V *ge* XP construction.

Keywords: Chinese, ge, degree classifier, scale

致　　謝

回顧語言所三年的時光，轉眼即逝，寫論文的這段時光，是最辛苦也是最充實的日子。在研究期間，學到很多事，其中之一，便是感謝，我很慶幸能得到許多人的幫助，才有最後的成果出現。

首先，要感謝我的指導教授 林若望老師。林老師上課方式很有趣，讓學生發現許多研究的樂趣。老師對研究充滿熱情及謹慎的態度，也很值得學習。在我寫論文的時候，老師很用心地指導我做研究，也常鼓勵我有自己的想法，並很有耐心地聆聽我的各種想法，給予許多寶貴的意見，協助我思考並解決問題。。

同時，也要感謝劉辰生老師的教導。劉老師上課及做研究都極為認真，常勉勵我們要自我要求，平常也一直很關心我們這些學生，在學生碰到挫折時，總是會給學生支持鼓勵。在寫論文時，很感謝老師抽空跟我討論，提供我各種思考的方向。接著，要感謝蔡維天老師在百忙之中來幫我口試。在旁聽蔡老師的課中，也從中學習了許多做學問的精神和方法。此外，還要感謝 Paul Portner 老師，老師有趣又充實的課程，開啟了我對邏輯語意學(Formal semantics)的興趣。另外，要感謝潘荷仙老師、許慧娟老師及劉美君老師，透過老師們認真地教導，讓我發覺語言學的更多面相及有趣之處。也要感謝清大的林宗宏老師，在旁聽老師的課時，適時給予我一些指導。在求學過程中，遇到許許多多的老師及學術上的朋友，在此也要感謝他們的指導。

感謝交大的同學、學長姐、學弟妹三年的陪伴，以及清大旁聽認識的學長姐和同學。尤其在做研究時，很感謝他們花時間跟我討論語料及分析。特別要感謝佳霖總是耐心地聆聽我的想法及分擔我的煩惱，還有惠瑜及縉雯也提供我了許多寫論文上的幫助。我還要感謝大學時代的一群好朋友們，一直願意分享我在課業上及生活上的煩惱和喜悅。

最後我要感謝我的家人(尤其是爸爸、媽媽和妹妹)，雖然在唸書時，無法常花時間陪伴家人，但他們總是一直鼓勵著我、支持著我，讓我能全心全意地努力，朝自己理想的方向前進。

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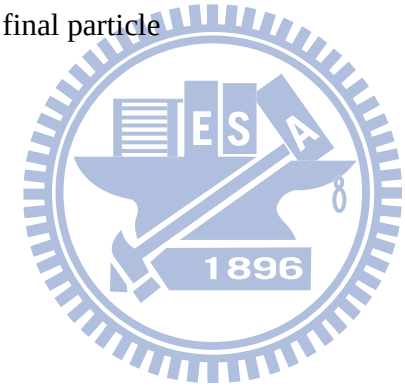
List of Abbreviations

A	Adjective
AP	adjective phrase
ASP	Aspect
CL	Classifier
N	Noun
NP	noun phrase
Num	Numeral
NumP	numeral phrase
V	Verb
VP	verb phrase
Q	question (*ma*)
SFP	sentence final particle



CHAPTER 1

INTRODUCTION

It is well known that *ge* is a generalized classifier in Mandarin Chinese. However, *ge* also has a specialized use in the postverbal position, distinct its use as a classifier as illustrated in (1). So as to distinguish this construction from the generalized classifier, I label it the V *ge* XP construction, where XP denotes different categories of phrases such as NPs, APs and NumPs.

(1) a. Women qu chi ge fan !
we go eat GE rice
'Let's go have a meal!'

b. Wo xiang chi ge guoyin zai zou!
I want eat GE satisfied then go
'I do not want to leave until I eat to my heart's content!'

c. Ta dei chi ge liang san wan fan cai hui bao.
he need eat GE two three bowl rice only will full
'He has to eat two or three bowls of rice to be full.'

The two usages of *ge* can be distinguished by the co-occurrence restriction of preceding numerals, as in (2). As a classifier, *ge* is able to be combined with numerals as in (2a).

However, the special use of *ge* does not allow for any preceding numerals.[1] Thus, (2b) is ungrammatical.

(2) a. wo chi le wu ge pingguo.
I eat ASP five GE apple
'I ate five apples'

b. *wo chi le liang ge fan.
I eat ASP two GE rice

Given the distinction above, one must first consider whether *ge* in V *ge* XP can be considered as a classifier or not. If *ge* is not a classifier, how does one interpret the meaning of *ge*? For example, compared with (3a), what kind of meaning does the presence of *ge* contribute to the phrase in (3b)?

(3) a. Yiqi qu chi fan ba!
Together go eat rice SFP
'Let's have a meal!'

b. Yiqi qu chi ge fan ba!
Together go eat GE rice SFP
'Let's have a meal!'

In addition, since XPs involve various types of phrases, as illustrated in (1), the question arises: how to derive a unified analysis for various XPs?

In fact, *ge* as a classifier has been extensively studied and is well-understood (cf. Chao

1 The numeral *yi* 'one' is acceptable in some cases of the special use of *ge*, but the issue of *yi* 'one' will be addressed later. Since *yi* 'one' is unique among numerals, it is not used for tests.

1968; Li 1998; Cheng & Sybesma 1998, 1999, 2004; Tang 1990). By contrast, although the special use of *ge* in (1) has long been an object of study, there is little agreement regarding its interpretation. The initial observation of this special use of *ge* can be traced back to Chao (1968) and Lü (1980). Many recent articles such as Lin (2001), Wu (2002), Big (2002 and 2004) and Shu (2007, ms) have been devoted to the theoretical explanation of *ge* in the V ge XP construction. However, these analyses vary greatly and leave many questions unanswered. The primary goal of this thesis is to address the the meaning and grammatical nature of *ge*.

The organization of this thesis is as follows: Chapter 2 describes questions relevant to *ge* from syntactic and semantic aspects and also discusses its precise nature. Chapter 3 reexamines previous literature dealing with *ge*. Chapter 4 introduces studies used as the background for the analysis of *ge* (see Doetjes 1997 and McNally & Kennedy2005), and proposes a unified analysis that *ge* is a degree quantifier and indicates the minimal part on the scale of an argument. Chapter 5 addresses directions for the future research and closes with a brief conclusion.

CHAPTER 2

PROPERTIES OF *GE*

This chapter first considers problems relating to *ge* in V *ge* XP. Three subclasses of this construction (i.e., V *ge* NP, V *ge* AP, and V *ge* NumP) are then introduced and the properties of each subclass are discussed.

2.1. Preliminary: Classifier or not?

In order to distinguish the two usages of *ge*, the individual classifier *ge* following numerals is termed as 'classifier *ge*,' while *ge* in the V *ge* XP construction is simply termed as '*ge.*' By comparing it with classifiers, specific properties of *ge* in V *ge* XP can be elucidated.

2.1.1. Classifiers in the postverbal position

In Mandarin Chinese, CL-NP only occurs in the postverbal position and expresses an indefinite and non-specific reading (cf. Cheng & Sybesma 2005), as illustrated in (4). Similarly, *ge* XP also displays the same distribution─the postverbal position, as in (5).

(4) Women xiang mai bu che

we want buy CL car

' We want to buy a car.'

(5) Women xiang mai ge che.

we want buy GE car

' We want to buy a car.'

However, the insertion of numerals can distinguish *bu* and *ge*. The classifier *bu* in (6a) is a nominal classifier used to count an individual unit. By contrast, *ge* in (6b), which does not allow for preceding numerals, should not be considered as a classifier.

(6) a. Women xiang mai liang bu che.

we want buy two CL car

' We want to buy two car.'

b. *Women xiang mai liang ge che

we want buy two GE car

Some nouns, such as *che* 'car,' do not utilize the classifier *ge* for individualization in forming Num+CL+N. Therefore, when *ge* occurs in front of *che* 'car,' one can only interpret *ge* in terms of its special use rather than as a classifier. In certain nouns that tend to combine with the classifier *ge* instead of others, the ambiguity between the two usages of *ge* may arise.

(7) Wo xiang mai ge liwu

I want buy GE gift

'I want to buy a gift.'

A more careful examination shows that V *ge* NP in (7) has two interpretations. One is a normal reading: 'buying a gift'. The other is a diminutive reading in the sense that 'buying a gift' is a trivial thing. However, the distinction is not always so clear to native speakers. Since in normal contexts one tends to utilize *ge* as a classifier, the trivial reading of *ge* requires additional contexts to signal its use.

2.1.2. *Ge* vs. other classifiers

Having clarified that *ge* in V *ge* XP is different from the generalized classifier *ge*, the question arises as to whether or not *ge* is still counted as a classifier. According to Chao's (1968, translated by Ding 1980:312) dichotomy of classifiers, the classifier system is divided into nine classes, as illustrated in Table 2.1: 1) Classifiers, or individual measures, i.e., Mc; 2) Classifiers associated with Verb-Object, i.e., Mc'; 3) Group measures, i.e., Mg; 4) Partitive measures, i.e., Mp, 5) Container measures, i.e., Mo; 6) Temporary measures, i.e., Mt; 7) Standard measures, i.e., Mm; 8) Quasi-measures, i.e., Mq; 9) Measures for verbs of action, i.e., Mv,

Table 2.1. The classifier system

	Number >1	Classifiers	Reduplicability	Compatibility with *de*	Nouns	Limited list
1) Mc	√	*ge* 'GE'	(√)	*	*ren* 'person'	√
2) Mc'	√	*ju* 'line'	(√)	( )	*hua* 'word '	√
3) Mg	√	*hang* 'line'	(√)	( )	*zi* 'word'	√
4) Mp	√	*dui* 'pile'	(*)	( )	*tu* 'soil'	√
5) Mo	√	*guo* 'pot'	(*)	( )	*mian* 'noodles'	*
6) Mt	*	*di* 'ground'	*	√	*dongxi* 'stuff'	*
7) Mm	√	*chi* 'length unit'	(√)	√	*bu* 'cloth'	(√)
8) Mq	√	*ke* 'class'	(√)	*	*	(√)
9) Mv	√	*tang* 'run'	(√)	*	*	√
ge	*	*ge*	*	*	*Fan* 'rice', san wan 'three bowls'	√

(adopted from Chao 1968 translated by Ding 1980: 312)[2]

The use of *ge* behaves like classifiers such as Mc', Mq, Mv, and Mt. However, through careful scrutiny, *ge* in V *ge* XP does not belong to any group of classifiers.

A. Comparison of classifiers associated with V-O, i.e. Mc'

This type of classifier is associated with V-O. The counting number may exceed one. In the postverbal position, the numeral *yi* 'one' is often omitted, as shown in (8).

2 The last line of properties of *ge* is not originally included, but added by the author of this thesis.

(8) Shuo yi/liang ju hua

say one/two Cl-line words

'say one/two lines of verse '

(9) a. chi ge fan

eat GE rice

b. *chi yi/liang ge fan

eat one/two GE rice

Consider (8) and (9); *ge* in (9a) occurs in the postverbal position, the same as classifier *ju* 'line' in (8), but the non-occurrence of numerals as in (9b) proves that *ge* is not a classifier.

B. Comparison with temporary measures, i.e. Mt

Temporary measures are nouns that follow numerals to express the measure of the exterior of things. *De* is usually inserted before nouns. No numeral except *yi* 'one' is allowed, and *yi* 'one' is used to express 'full' and 'entire'. *Ge* does not behave as a noun and is forbidden to occur with *de* 'DE.'

(10) yi di (de) dongxi

one Cl-ground DE things

'a ground of stuffs'

(11) a. *nian yi ge de shu

study one GE DE book

b. *hua yi ge de liang san bai kuai

spend one GE DE two three hundred dollar

C. Comparison with measures for verbs of Action, i.e. Mv

This kind of classifier describes the action in terms of times, manner and instrument. The example *chi yi ge* 'eat one *ge*' is acceptable when it means 'eat one (thing)' where *yi ge* approximates a pronoun such as *one*.[3]

(12) a. zou yi tang

walk one Cl-run

'walk a run'

b. *chi yi dun*

eat one Cl-meal

'eat a meal'

(13) a. *zou yi ge

walk one GE

b. chi yi ge

eat one GE

3 The other kind of example can be found in intransitive verbs such as *xio yi ge* 'smile one GE,' meaning 'to do a smile', but this is not the main concern in this thesis .

From the above comparisons of (8)-(13), one can conclude that *ge* behaves differently from other classifiers in the postverbal position and *ge* does not belong to any group in Chao's (1968) classification. Therefore, it seems incorrect to regard *ge* as a classifier at least based on its syntactic behaviors.

2.2 Problems of the V *ge* XP construction

In addition to the issue of *ge* as a classifier, there are also other interesting problems surrounding *ge*, as discussed in the following.

2.2.1. Why *ge* is present?

Compare the following examples in (14) and (15). It is interesting to note that *ge* is optional. Despite the optional occurrence, *ge* still contributes to the meaning when it is present. In addition, consider (16), the V *de* construction in (16a) seems to denote the same expression as V *ge* XP construction in (16b). This begs the question: can a generalized interpretation for the V *ge* XP construction be derived? This issue will be discussed in Chapter 4.

(14) a. chi ge fan
eat GE rice
'have a meal'

b. chi fan
'have a meal'

(15) a. chi ge liang wan fan

eat GE two CL-bowl rice

'eat two bowls of rice'

b. chi liang wan fan

eat two CL-bowl rice

'eat two bowls of rice'

(16) a. chi de guoyin

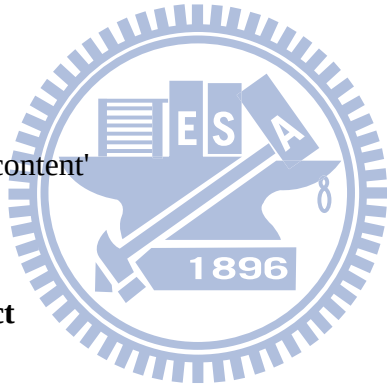
eat DE satisfied

'eat to one's heart content'

b. chi ge guoyin

eat GE satisfied

'eat to one's heart's content'



2.2.2. The definiteness effect

It is known that English *there*-insertion sentences display a definiteness effect (or DE), as shown in (17). Interestingly, *ge* XP seems to display similar DE as well. More specifically, definite descriptions and universal quantifying expressions are not allowed to be combined with *ge*, as illustrated in (18). The grammaticality shown in (18d) and (18e) seems to represent counter examples to DE. However, such examples are parallel to the Chinese *you* 'have' construction, shown in (19). Thus, it is not surprising for the possessive NP to be interpreted as indefinite (cf. Huang 1987: 239).

(17) There is a movie/* this movie/*every/ *most of movie(s) available.

(18) a. Kan ge dianying

watch GE movie

'watch a movie'

b. *Kan ge suoyou de/ mei yi bu dianying

watch GE all DE/ every one Cl movie

'watch all/every movie(s)

c. *Kan ge zhe/na yi bu dianying

watch GE this/that one Cl movie

'watch this/that movie'

d. Kan ge Li-Ann de dianying

watch GE Ann Li's movie

'watch a movie of Ann Li's'

(19) a. You yi bu dianying keyi kan

have one Cl movie can watch

'There is a movie available to watch'

b. *You suoyou de/ mei yi bu dianying keyi kan

have all DE/ mei yi Cl movie can watch

'There are/is all/every movie(s) available to watch'

c. *You zhe/na yi-bu dianying keyi kan

have this/that yi-Cl movie can watch

'There is this/that movie available to watch'

d. You Li-Ann de dianying keyi kan

have Ann Li's movie can watch

'There is a movie of Ann Li available to watch'

2.2.3. The issue of the numeral *yi* 'one'

As previously mentioned, *ge* does not permit preceding numerals, illustrated as follows.

(20) a. *pao yi ge bu

run one GE step

b. *mai yi ge wu liu ben shu

buy one GE five six CL-volume book

c. ?he yi ge tongkuai

drink one GE joyful

Given the illegitimacy of V *yi ge* XP, *ge* should be distinguished from *yi ge* 'one GE' at least in the synchronic level, at which it is not easy to judge whether *yi* is really "missing" or simply not appearing in the postverbal position (cf. Hsieh 2008 and Cheng & Sybesma 1999).[4] However, dropping *yi* 'one' may be explained from a diachronic perspective, further discussed by Lü(1999). Overall, numerals cannot be inserted before *ge* in V *ge* XP.

4 Hsieh (2008:126) considers that *yi* 'one' is just missing, illustrated as follows.

(i) xi (yi) ge shuo
wash one GE hand
'wash hands'
(ii) shui (*yi) ge shi fenzhong
sleep one GE ten minutes
'sleep for ten minutes '

On the other hand, Cheng & Sybesma (1999) argue that in the postverbal position, [classifier+NP] is not equal to [*yi* +classifier+NP] and propose two different structures.

(21) a *kan liang ge dianying

see two GE movie

b. kan liang bu dianyin

see two CL movie

'see two movies'

It is also interesting to note that in Taiwanese Southern Min (Li & Wang 2003), the numeral *yi* 'one' is obligatory before *ge*.

(22) a. thian cit-e kua

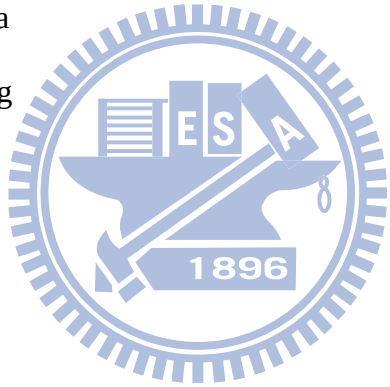
listen one-GE song

'listen to songs'

b. ciah cit-e pa

eat one-GE full

'eat to one's fill'



This contrast may be related to the parametric difference between Mandarin and Taiwanese Southern Min (or TSM) in nominal phrases. Classifier phrases are allowed to occur as objects in Mandarin while they are not allowed in TSM. In other words, in TSM, numerals cannot be dropped in the postverbal position. This indicates that *ge* still shares some properties with classifier *ge*. This comparison provides fertile ground for future studies.

2.3. Classification of V *ge* XP: three subtypes

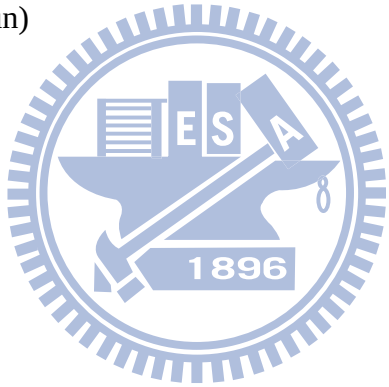
In this study, the V *ge* XP construction is divided into three types based on the category of the XP, i.e., NP, AP, and NumP.

I. V *ge* NP

(23) a. chi ge fan, (idiom noun)
eat GE rice
'have a meal'

b. he ge shui (mass noun)
drink GE water
'drink some water'

c. tiao ge wu
dance GE dance
'have a dance'



In this type, most V-NP examples are actually V-N compounds. The V *ge* NP is interpreted as a complex predicate consisting of 'do' and 'V-ing of (NP)'.

II. V *ge* Numeral phrases

As apposed to bare nouns in type I, numeral phrases with V are not V-N compounds; rather, they are objects or adjuncts of verbs. There are additional subtypes, illustrated as follows.

A. Common objects of verb

(24) a. chi ge liang san wan fan

eat GE two three CL-bowl rice

'eat two or three bowls of rice'

b. zhuan ge gi mao qian

earn GE some cent money

'earn some cents of money'

B. Frequency phrases

(25) a. chi ge liang ci niupai

eat GE two time steak

'eat steak twice'

b. su shi, yi ge yue chi ge liang san ci jiu hao, bu yao

fast food, one CL month eat GE two three time just enough, not want

tai chang chi.

too often eat

'Fast food, eating it twice a month is enough; do not eat it too often.'

C. Duration phrases

(26) a. shui ge yi huier

sleep GE one while

'sleep for a while'

b. zou ge er san shi fenzhong

walk GE two three ten minutes

'walk for twenty or thirty minutes'

D. Quantifying phrases

(27) yin ge shi fen

copy GE ten Cl

'print ten copies'

III. V *ge* AP

The adjective phrases (i.e., APs) denote result states or the extent of verbs, as in the following.

A. Adjectives

(28) chi ge guoyin/tongkuai

eat GE satisfied/ joyful

'eat to one's heart's content /joyfully'

B. Idiom chunks

(29) a. wen ge yi-qing-er-chu

ask CL one-clear-two-clear

'ask for perfect clarity'

b. shuai ge bi-qing-lian-zhong

stumble nose-bruise-face-swollen

'stumble and get seriously hurt'

2.3.1. V ge NP

First of all, the morphological features of V *ge* NP must be considered. Based on Li & Thompson (1981), the combination of verbs and objects includes two subtypes: (i) a verb-object compound, such as *chou yan* 'to smoke a cigarette' and *shui jiao* 'to have a sleep;' and (ii) a verb-object structure (not a compound), such as *he tang* 'to drink soup.'

Based on the definitions, it seems that *ge* can occur in both V-O compounds and V-O structures.[5] In addition, the compositional property of *ge* and V-NP is further examined. In Zhu (1984:110), the thematic relation between verbs and objects are varied, as illustrated in (30), where an object can be considered:

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5 Li & Thompson (1981) further classify the verb-object compounds into three types, illustrated in the following examples.

(i) geming
'revolution'

(ii) shangfeng
'catch a cold'

(iii) shuijiao
'sleep'

However, not all of these types allow the insertion of *ge*, e.g., **shang ge feng* 'catch a cold'. There seems to be limitations for *ge* to occur in these verb-object compounds. The third type is more likely for the insertion of g*e*. Since the morphology of word compounds is not the main issue here, I will leave it to future studies. In this thesis, I only focus on the interpretation of g*e* in the V *ge* XP.

(30) a. as a theme/patient of the action: *ca boli* 'clean glass' *chi pingguo* 'eat apples'

b. as an agent of the action: *lai keren* 'come customers (there come customers)'

c. as an instrument used by the action: *xi lengshui* 'shower cold water (take a cold shower), *chou yindou* 'smoke a pipe (use a pipe to smoke)'

d. as a result caused by the action: *gai fanzi* 'build a house', *xiexin* 'write mails'

e. as a destination of the action: *shang guangzhou* 'go to Guangzhou', *jin yiyuang* 'go to hospital'

f. as the duration time of the action: *zhu san tian* 'live three days', *deng yihuier* 'wait a moment'

Ge can be inserted in front of these objects without changing their thematic relations, though ambiguity can be found between classifier use and *ge* in some cases. There is also some limitation on *ge* occurring in verb-object compounds, but *ge* is quite free in verb-object structures. However, it is difficult to clearly distinguish compounds and structures, and the subtle distinction is not the main concern of the present work. Thus, they are classified into one type called “V *ge* NP”.

In addition to morphological issues of *ge*, the syntactic issue must be addressed. As mentioned earlier, whether *ge* is present or not does not affect the grammaticality of V-O compounds/structures, as shown in (31) and (32).

(31) Women yiqi qu chi fan!

We together go eat rice

'Let's have a meal together!'

(32) Women yiqi qu chi ge fan!

We together go eat GE rice

'Let's have a meal together!'

Furthermore, the meaning of V *ge* NP in (32) is comprehended as V-NP in (31) in roughly the same way. However, according to the principle of economy in language use, there is no reason for the existence of two structures with exactly the same interpretation and function. Therefore, differences regarding the presence/absence of *ge* should be further explored and explained.

To begin with, a careful observation of the data is needed. V *ge* NP usually appears in contexts such as *zhibuguo* 'merely', *lian* 'even', *cai* 'just', *eryi* 'only', and *jiu 'only,'* which all imply a trivial reading, illustrated as follows.

(33) Cai pao ge bu jiu shou buliao, tili zhen cha.

just run GE step then tolerate endless, physical strength really bad

'It's only running and you cannot bear it. Your physical strength is really bad.'

(34) Ta lian xiaqu dao ge lese dou yao shuzhuangdaban.

she even go down throw GE trash DOU want dress up

'Even if she is just going down to throw out trash, she still dresses up.'

(35) Women lian dao xibian wan ge shui ye bu xing ma?

we even to riverside play GE water also not allowed Q

'Is it not allowed even if we are just going to the river side to play in the water?'

(36) Zhiyao tian ge wenjuan jiu hao.

only fill GE questionnaire just fine

'Just fill in the questionnaire and that is all.'

(37) Tai daomei le , tiao ge wu ye chushi.

too miserable SFP, dance GE dance also have an accident

'How miserable! Even dancing could cause an accident.'

(38) Chi ge fan eryi, you biyao pao zheme yuan ma?

Eat GE rice only, have necessity run that far Q

'Is it necessary to go that far just to have a meal?'

(39) Ni shi xin lai de ma? lian dao ge cha ye bu hui?

you are new come DE Q? even pour GE tea also not can

'Are you new here? You cannot even pour tea.'

(40) Shang ge cesuo zhe dian xiao shi ye yao baogao ma?

go GE toilet this kind small thing also need report Q

'Going to the toilet is such a small thing, is it necessary to report it?'

(41) Wo zhibuguo jiao ni si ge wan, you zheme tongku ma?

I merely call you wash GE bowl, have this pain Q

'I am just asking you to wash dishes. Is it that painful?'

In addition, in a context in which speakers want to address exaggerated concern for health in a

trivial matter such as drinking water, the expression is better transcribed in (42a) than (42b).

(42) a. Lian he ge shui ye yao jiangqiu yangsheng, tai kuazhang le!
even drink GE water also want address health, too exaggerate SFP
'Even when drinking water, attention must be paid to health. It is too much!'

b. Lian he shui ye yao jiangqiu yangsheng, tai kuazhang le.
even drink water also want address health, too exaggerate SFP
'Even when drinking water, attention must be paid to health. It is too much!'

In the same way, the occurrence of *ge* is preferred in the following contexts, as illustrated in (43)-(45).

(43) a. Rang wo he ge shui zai shuo.
let me drink GE water then speak
'Let me drink some water first.'

b. ?Rang wo he shui zai shuo.
let me drink water then speak
'Let me drink some water first.'

(44) a. Women bu yong hu song liwu, yiqi chi ge fan jiu hao.
we not necessary each send gift, together eat GE meal just fine
'We do not have to send gifts to each other. Just having a meal together is fine.'

b. ?Women bu yong hu song liwu, yiqi chi fan jiu hao.
we not necessary each send gift, together eat meal just fine
'We do not have to send gifts to each other. Just having a meal together is fine.'

(45) a. Tianqi hen re, shaowei zou ge lu jiu hanliu-jiabei.
weather very hot, a bit walk GE path just sweating
'It is very hot. A bit of walking will cause people to sweat a lot.'

b. ?Tianqi hen re , shaowei zou lu jiu hanliu-jiabei.
weather very hot, a bit walk path just sweating
'It is very hot. A bit of walking will cause people to sweat a lot.'

Even though the above contrast is subtle, examples contrasting sharply are shown in (46) and (47). In the topic-comment sentences, when the comment denotes importance such as *zheme zhongda de shi* 'such an important thing,' it is illegitimate for V *ge* NP such as *jie ge hun* 'get married' to be its topic. This illegitimacy, as in (46b), further confirms that V *ge* NP denotes a trivial reading.

(46) a. Jie hun zheme zhongda de shi, ni juran bu gen fumu
Marry marriage such important DE thing, you unexpectedly not with parents
shangliang?!
discuss
'To get married is such an important thing, unexpectedly, and you do not discuss it with your parents?!'

b. *Jie ge hun zheme zhongda de shi , ni juran bu gen fumu
Marry GE marriage such important DE thing, you unexpectedly not with parents
shangliang!
discuss!

In contrast, V *ge* NPs such as *jie ge hun* 'get married' is appropriate in contexts with trivial readings, as shown in (47).

(47) a. Zhibuguo shi jie ge hun, you biyao zheme puzhang-langfei ma?
Merely be marry GE marriage, have necessity such extravagant Q?
'Is it necessary to be that extravagant just to get married?'

b. Zhibuguo shi jie hun, you biyao zheme puzhang-langfei ma?
Merely be marry marriage, have necessity such extravagant Q?
'Is it necessary to be that extravagant just to get married?'

In addition to activity verbs, the above contrast is also shown in stative verbs. It is not intuitive for V *ge* NP to occur in contexts such as compliments. In (48b), admiration for a trivial thing is quite odd unless it denotes an ironic reading. A similar example is shown in (49). On the other hand, V *ge* NP such as *hui ge yingwen* 'understand GE English' is perfect in an unimportant and trivial context.[6]

(48) a. Ni hui fenlanwen, zhenshi liaobuqi!
you understand Finnish, really marvelous
'That you understand Finnish is really marvelous!'

b. ??Ni hui ge fenlanwen, zhenshi liaobuqi!
you understand GE Finnish, really marvelous
'That you understand Finnish is really marvelous!'

6 Lin (2001) mentions that sentences with stative verbs represent “under evaluation”. His example is : *dong ge fawen, you sheme liaobuqi?* 'Understanding French, is there any big deal?' His analysis will be discussed in Chapter 3.

(49) Ni hui ge fawen, hao liaobuqi o! (Ironic)

you understand GE French, good marvelous SFP

'That you understand French is really marvelous!'

(50) Hui ge yingwen zheme xisong-pingchang de shi, ye gan na chulai xuanyao!

understand GE English such trivial normal DE thing, also dare take out show off

'Understanding English is such a trivial and normal thing; yet you also dare to use it to show off!'

To conclude, the examples discussed above have shown that V *ge* NP denotes a trivial reading.

2.3.2. V ge AP

Unlike the V *ge* NP construction, *ge* is obligatory in V *ge* AP, where APs include adjective phrases and idiom chunks.

(51) a. wan ge jinxing

play GE one's heart's content

'play to one's heart's content'

b. *wan jinxing

play one's content

(52) a. chi ge yi-gan-er-jing

eat GE one-clean-two-clean

'eat up thoroughly'

b. *chi yi-gan-er-jing

eat one-clean-two-clean

*G*e also often occurs with idiom chunks, as shown in (53).

(53) a. chi ge guoyin

eat GE satisfied

'eat to one's heart's content'

b. wan ge tongkuai/ jinxing

play GE joyful/ to one's heart content

'play joyfully/ to one's heart content'

c. he ge bu-zui-bu-gui

drink GE no-drunk-no-return

'drink to be dead drunk'

d. ku ge rou-chang-cun-duan

cry ge brokenhearted

'cry brokenheartedly'

e. da ge bi-qing-lian-zhong

beat GE nose-bruise-face-swollen

'beaten black and blue'

f. zhuang ge tou-po-xie-liu

hit GE head-broken-blood-flow

'hit so as to have one's head broken and bleeding (as a result of a savage beating)'

g. qi ge ban-si

anger GE half-die

'very angry as if being half dead'

h. die ge si-jiao-chao-tian

fall GE four-leg-toward-sky

'fall on one's back'

i. ji ge shui-xie-bu-tong

crowd GE water-leak-no-through

'very crowded '

j. xiao ge buting

smile GE nonstop

'smile nonstop'

k. wang ge yi-gan-er-jing

forget GE one-clean-two-clean

'totally forget'

l. da ge fensui

hit GE smashed

'hit so as to be smashed'

m. sha ge pian-jia-bu-liu

kill GE fragment-armor-no-leave

'kill so as to be completely wiped out'

n. ai ge si-qu-huo-lai

love GE die-go-live-come

'love very deeply'

o. du ge tian-hun-di-an

study GE sky-murky-earth-dark

'study till dark all around'

p. gao ge tou-hun-nao-zhang

make GE head-dizzy-brain-swollen

'make (someone) dizzy and have a headache'

For the analysis of *ge* in V *ge* AP, there are two major proposals. Researchers who consider V *ge* AP as a V-O (i.e. verb-object) construction tend to analyze *ge* as a classifier, such as Zhu (1982), Shao (1984) and Shi (2006). Other studies which treat V ge AP/VP as a V-C (i.e., verb-complement) construction tend to analyze *ge* as a particle or a lexicon having the same function as *de*, such as in Lü (1984) and You (1983).

Since *ge* is often compared with *de*, the analysis concerning *de* should be considered first. The particle *de* contains two major functions, as illustrated in (54). (e.g. Zhu 1982 and Lü 1980).

(54) (i) denoting possibility

kan de jian 'able to see', *na de dong* 'able to take', *shui de zhe* 'able to sleep', *chu de qu* 'able to go out'

(ii) introducing a manner/result complement.

kan de duo 'see a lot', *shuo de hen qingchu* 'speak very clearly'

The second function of *de* is further classified into subtypes based on the properties of complements. In Li & Thompson (1981: 623-626), it is called 'complex stative construction,' containing two types of inferred meanings.

A. Manner inferred. The second predicate usually describes the manner of the first predicate.

(55) Ta pao de hen kuai
he run DE very fast
'He runs very fast.'

B. Extent inferred. The event of the first predicate is done to such an extent that the result is the state expressed by the second predicate.

(56) a. Ta xiao de zan bu qilai
he laugh DE stand no up
'He laughed so much that he could not stand up.'
b. Ta zuo de hen lei
he walk DE very tired
'He walked till he got very tired.'

C. Either manner or extent inferred

(57) Women wan de hen tongkuai.
we play DE very happy
(i) 'We played very happily.' (manner inferred)

(ii) 'We play to the point of being very happy.' (extent inferred)

The manner inferred is also known as a descriptive complement construction. The extent inferred is considered to be a resultative complement construction (e.g., Huang 1988). [7]

Ge and *de* may display similar constructions, though *ge* denotes the extent of the result only.

I. Manner

(58) ??Ta pao ge kuai

he run GE fast

'He runs fast.'

II. Extent

(59) Wo xian wan ge jinxing zai huijia.

I want play GE one's heart's content then go home

'I want to play to my heart's content and then go home.'

III. Either Manner or Extent

---

7 The resultative construction of *de* may also take a clause form.

(i) ta ku de shoupa dou shi le
he cry DE handkerchief also wet ASP
'He cried so much that even the handkerchief got wet.'

(ii) *ta ku ge shoupa dou shi le
he cry GE handkerchief also wet ASP

However, *ge* is not allowed to occur in this form. With respect to the ungrammaticality, since it is not the focus of this study, I leave it to future studies.

(60) Women yiqi qu wan ge tongkuai (ba)!

We together go play GE happy SFP

we together go play DE very happy

(i) ??'Let's play very happily.'

(ii) 'Let's play to the point of being happy.'

(61) Wo xiang chi ge guoyin, zai hui jia.

I want eat GE satisfaction then go home

(i) ??'I want to eat very satisfactorily and then go home.'

(ii) 'I want to eat to the point of being satisfied and then go home.'

For the mixed type III, the extent (or resultative) reading is also much easier to comprehend. In addition, the examples in V *ge* AP are of the resultative category. The second predicate is thus called the result state. The following examples focus on the resultative complement construction.

Concerning *de*, Huang (1988: 293-297) points out that there are two types of causatives, illustrated as follows.

(i) Inchoative resultative constructions

(62) Zhangsan$_i$ zui de [e$_i$ zhan bu qilai]

Zhangsan drunk DE stand no up

'Zhangsan was so drunk that he could not stand up.'

(63) a. The syntactic representation

[$_S$ NP1 [$_{VP}$[$_{V'}$ V1 [$_{S'/AP}$ (pro) V2]]]]

NP1: Agent/Experiencer

V1: Action/State

V2: Result/Extent

b. [$_S$ Zhangsan [$_{VP}$[$_{V'}$ zui de [$_{S'/AP}$ (pro) zhan bu qilai]]]]

(ii) Causative constructions

(64) Zhe ping jiu zui de [Zhangsan zhan bu qilai]

This Cl-bottle wine drunk DE [Zhangsan stand no up]

'This bottle of wine made Zhangsan too drunk to stand up.'

(65) a. The syntactic representation

[$_S$ NP1 [$_{VP}$ NP2 [$_{V'}$ V1 [$_{S'/AP}$ (pro) V2]]]]

NP1: Causer

NP2: Patient/Cause

V1: Action

V2: Result/Extent

b. [$_S$ Zhe ping jiu [$_{VP}$ Zhangsan [$_{V'}$ zui de [$_{S'/AP}$ (pro) zhan bu qilai]]]]

However, V *ge* AP only occurs in inchoative resultative constructions not in causative constructions. V ge AP may be assumed to display similar syntactic form as V *de* AP/S' in inchoative resultative constructions. In (66), [*ge lan-zui-ru-ni*] is assumed to be a functional

phrase, though it will be revised in Chapter 4.

(66) [$_{S}$ Zhangsan [$_{VP}$[$_{V'}$ he [$_{FP}$ ge [$_{S'/AP}$ (pro) lan-zui-ru-ni]]]]] cai hui jia

Zhangsan drink GE dead drunk then go home

'Zhangsan drank to be dead drunk, then went home. '

NP1: Agent/Experiencer

V1: Action/State

V2: Result/Extent

Despite the similarity in the resultative complement constructions, *ge* also presents properties distinct from *de*.

First, the result states can be modified by degree adverbs such as *shaowei* 'a bit,' *youdian* 'a bit,' *hen* 'very,' and *feichang* 'extremely,' when occurring with *de* but not with *ge*, illustrated in (67) and (68).

(67) a. wan de hen/feichang /geng tongkuai

play DE very/extremely/more joyful

'play very/extremely/more joyfully'

b. chi de shaowei/youdian bao

eat DE a bit / a bit full

'eat to the state of being a bit full'

(68) a. *wan ge hen/feichang /geng tongkuai

play GE very/extremely/more joyful

b. *chi ge shaowei/youdian bao

eat GE a bit / a bit full

It seems that the degree adverbs and *ge* display certain complementary distribution, in which they may have a similar function. The co-occurrence restriction will be further discussed in Chapter 4.

Consider (69), where the perfective aspect marker *le* can occur with *ge* but not with *de*.

(69) a. ta yi bu xiaoxin jiu die le ge si-jiao-chao-tian.

He one not careful then fall ASP GE four-foot-toward-sky

'Without paying attention, he fell on his back.'

b. *ta yi bu xiaoxin jiu die le de si-jiao-chao-tian.

He one not careful then fall ASP DE four-foot toward-sky

The aspect marker *le* indicates that the activity is done and the result is realized. One possible explanation is that *de*, marking a result state, has a similar aspectual function as *le* and thus forbids the co-occurrence. On the other hand, although *ge* introduces a result state, *ge* might not have such an aspectual function.

In addition, the perfective aspect marker *le* tends to occur with verbs containing inherent bounded meanings such as *wang* 'forget' (e.g. Li & Thompson 1981:195). The same is true for *shuai* 'fall' and *die* 'fall'.

(70) a. Tian yu lu hua, hai ta shuai le ge bi-qing-lian-zhong

weather rain road slippery, cause he fall ASP GE nose-bruise-face-swollen

'It is raining and the road is slippery; thus, he fell down and got bruises.'

b. Shiqing tai duo, najian shi wo zaojiu wang le ge yi-gan-er-jing
things too more, that thing I already forget ASP GE one-clear-two-clear
'There are too many things (to remember) and I have already forgotten that thing.'

However, verbs without inherent end points require certain contexts such as sequential events to license the occurrence of *le*, as illustrated in (71). This can also be compared with the V *de* AP/S' construction in (72).

(71) a. ?wo qu Kending wan le ge guoyin
I go Kending play ASP GE satisfied
'I went to Kending to have fun, and then returned.'
b. wo qu Kending wan le ge guoyin cai huilai
I go Kending play Asp GE satisfied then return
'I went to Kending to have fun, and then returned.'

(72) wo qu Kending wan de hen guoyin (cai huilai)
I go Kending play DE very satisfied (then return)
'I went to Kending to have fun, and then returned.'

The above evidence proves that *ge* does not functions like *de* in certain ways.

For the function of *ge*, Zhu (1982: 49, 121-122) argues that adjectives or verbs with a preceding *ge* become nominalized structures. The nominalized argument is considered as a degree object, which denotes a high degree. There are three types of the degree objects:

(i) “ge”+Adjectives:

shuo ge mingbai 'say clearly', *wan er ge tongkuai* 'play satisfactorily', *pao le ge kuai* 'run fast'

(ii) "ge"+*buting* 'nonstop' (*buliao, buxiu, meiwan*):

xiao ge buting 'smile endlessly', *shuo le ge meiwan* 'speak endlessly'

(iii) "ge"+ idioms:

da le ge luo hua liu shui 'hit very seriously', *shuo ge yi qing er chu* 'speak very clearly'

(From Zhu 1982: 121-122)

However, it is doubtful that *ge* actually denotes a high degree since the adjectives denote high degree inherently from their lexicons.

2.3.3. V *ge* NumP

When *ge* occurs in front of numeral phrases, it presents an approximation of the numerals (cf. Zhu 1982: 49). More examples are shown in the following.

(73) a. Wo jianyi ni xian hua ge liang bai yuan mai fuzhuang zazhi
I suggest you first spend GE two hundred dollars buy clothing magazine
lai yanjiu kankan.
to study try
'I suggest you spend two hundred dollars to buy a magazine about clothing to study.'

b. Ta yi tian zhi qingxing ge ji ge xiaoshi, qita shijian dou
he one day only wake GE several Cl hour, other time all
zai hunshui.
in sleep

'He is awake for a couple of hours a day, and asleep the rest of the time.'

c. Zai shou ge wu gongjin jiu hao
more thin GE five kilo just fine
'Losing another five kilos is enough.'

d. Shuo dao aoye, ta ao ge san tian san ye ye wusuowei, wo
speak to stay up late, he stay GE three day three nights also indifferent, I
lian ao ge yi tian dou mei banfa
even stay GE one day all no ways
'Speaking of staying up late, he is indifferent to staying up late for three days and nights, but I cannot even stay up late for one day.'

In addition, consider (74) and (75), V *ge* NumP is different from V *ge* NP in that it does not clearly express a trivial interpretation of the event. More specifically, V *ge* NumP is acceptable in contexts such as (74), which denotes a trivial meaning, as well as a context such as (75), which involves a significant event.

(74) He ge liang san ping weishiji, zhe dian xiao shi, dui Zhangsan
drink GE two three bottle Whiskey, this bit small thing, for Zhangsan
eryan, bu suan sheme.
speak, not count what
'Drinking two or three bottles of whiskey, such a trivial thing, is no big deal for Zhangsan.'

(75) Dian li yao jin ge yi bai ben shu, zheme da de shi,
Store inside want import GE one hundred CL-volume book, such big DE thing
zenme mei gen laoban baobei ne?
why not with boss notify Q
'To import one hundred of books is such a big thing, why don't you tell the boss?'

However, some adnominal quantifiers other than numerals are prohibited, illustrated in (76) (c.f. Chapter 2 DE). The ungrammaticality will be explained in Chapter 4.

(76) a. *Wo xiang jie ge mei yi ben xiaoshuo lai kan
I want borrow GE every one CL-volume novel come see
'I want to borrow each novel to read.'
b. *Wo xiang jie ge suoyou/dabufen de xiaoshuo lai kan
I want borrow GE all /most DE novel come see
'I want to borrow most novels to read.'
c. *Wo xiang jie ge hendou ben xiaoshuo lai kan
I want borrow GE many CL-volume novel come see
'I want to borrow many novels to read.'
d. *Wo xiang jie ge zhe/na yi ben xiaoshuo lai kan
I want borrow GE this/that one CL-volume novel come see
'I want to borrow this/that novel to read.'

2.4. Summary

To conclude, some issues surrouding *ge* such as DE and the co-occurrence restriction of

degree modifiers in V *ge* AP are elaborated. XPs are further divided into three subtypes (i.e., NP, NumP and AP) and then examined. Each type of V *ge* XP is summarized as follows.

I. V *ge* NP: do a trivial event such as V-NP

(77) a. wan ge shui
play GE water
'do a trivial event such as playing water'

b. nian ge shu
read GE book
'do a trivial event such as reading'

c. hui ge fawen
understand GE French
'hold a trivial event such as understanding French'

II. V ge AP: do an event of V-ing to achieve some kind of state

(78) a. chi ge guoyin
eat GE satisfied
'eat to the state of being satisfied'

b. die ge si-jiaoi-chao-tian
fall GE four-foot-toward-sky
'fall to the state of being four-foot-toward-sky' (or, fall on one's back)

III. V ge NumP: do an event of V involving approximate numeral phrases

(79) a. mai ge liang san ben shu

buy GE two three CL-volume book

'buy approximately two or three volumes of books'

b. jie ge shi ben xiaoshou

borrow GE ten CL-volume novels

'borrow approximately ten volumes of novels'

In generalization, each type of V *ge* XP seems to share some property, which is the minimal part of the XP argument, illustrated in (80). The expression of the minimal part which relates to degree and quantity will be further discussed in Chapter 4.

(80) a. V *ge* NP: a trivial event →the minimal quantity on the scale of nouns

b. V *ge* AP: a certain state → the minimal degree of the existence of property on the scale of adjectives

c. V *ge* NumP: an approximate number→ the minimal quantity on the scale of numerals

Initially, *ge* is a classifier, but it loses its function to count a unit and thus denotes an uncertain quantity or degree, relatively very small, i.e., minimal. This property of *ge* is similar to the quantifying expressions mentioned in Doetjes (1997). Before further examining properties of *ge*, previous analyses of *ge* are described.

CHAPTER 3

LITERATURE REVIEW

The V *ge* XP construction has received ample attention in the literature. Significant studies include those by Lin (2001), Wu (2002), and Shu (2007, ms). These analyses make unique contributions to the field, but none provide a unified account of the interpretation of *ge* both syntactically and semantically. Such a unified account is the main goal of this study.

Initially, according to Lü (1980:221), *ge* is divided into two types of usages: one as a generalized classifier, the other related to action. For the latter, V *ge* Object, for example, expresses "liveliness" and "casualness," illustrated as follows.

(81) (i) generalized individual classifier, such as *yi ge ren* 'one person'; *lian ge pingguo* 'two apples'

(ii) usage related to action

a) V+*ge*+objects. The whole phrase expresses liveliness and casualness.

Xi ge zao, shui ge jiao, xiu xi xiu xi

wash CL shower, sleep CL sleep, relax relax

'Take a shower, take a sleep, and relax.'

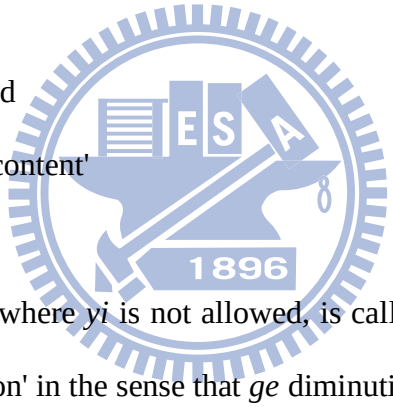
The interpretation of action-related usage is plausible, but fails to address how to give a precise syntactic analysis to numerous examples.

3.1. Lin (2001): The diminutive analysis

Lin (2001) uses the insertion of *yi* 'one' to distinguish the diminutive *ge* and the measure *ge*, illustrated as (82a) and (82b), respectively.

(82) a. chou *(yi) ge yan
smoke one GE smoke
'have a smoke'

b. chi (yi) ge guoyin
eat one GE satisfied
'eat to one's heart's content'

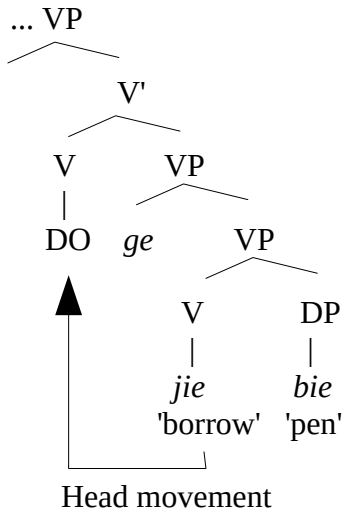


In Lin (2001:85), V *ge* NP, where *yi* is not allowed, is called diminutive construction, where *ge* expresses 'under-evaluation' in the sense that *ge* diminutizes the event.

(83) Jie ge bi, hao ma ? (Example from Lin 2001)
lend GE pen, good Q
'Would you please lend me a pen?'

In Lin's (2001: 88) approach, a sentence like (83) is derived from a structure like (84). The syntactic approach may refer to Huang's (1997) light verb syntax.

(84)



Lin's analysis captures certain interpretations of *ge* in V *ge* (bare) NP. However, this analysis does not explain the definiteness effect in the sense that definite NPs cannot occur after *ge*. In addition, his study does not cover others examples such as V *ge* NumP, in which *ge* is measure *ge* or diminutive *ge*. In addition, as addressed in Chapter 2, numeral *yi* 'one' is not allowed to precede *ge*; thus, it is problematic to use *yi* 'one' as a test to distinguish diminutive *ge* and measure *ge*. On the other hand, the interesting idea of "diminutive," though not altogether accurate, will be further discussed in Chapter 4.

3.2. Wu (2002): The DP analysis

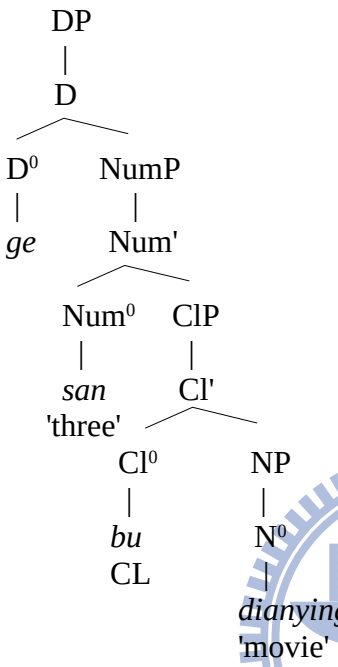
In Wu (2002), *ge* in the V *ge* XP construction is used to count the event denoted by the predicate. Under her approach, *ge* is moved from a base-generated CL^0 to a weak unselective D^0, like an indefinite *a*. The sentence (85) is derived from the structure in (86).

(85) kan ge san bu dianying

see GE three CL movie

'watch three movies'

(86)



For the example of *pao ge feikuai* 'run GE fast', she further argues that the adjective *feikuai* 'fast' is actually a nominalized phrase and thus licensed by the nominalizer *ge*. However, if an AABB form such as *tongtongkuaikuai* 'very joyful' is nominalized, it will then predict that the *de* particle will take a nominalized secondary predicate. However, in an example such as *wan de tongtongkuaikuai* 'play very joyfully,' the secondary predicate following *de* is not considered as a nominalized phrase in the literature. It is doubtful that the AABB form after *ge* is a nominalized adjective phrase. Thus, in this study, predicates such as *gouyin* 'satisfied' and *tongkuai* 'joyful' are still categorized as APs instead of nominalized APs.

In addition, Wu (2002) suggests that *ge* marks telicity and thus can cooccur with perfective marker *le*, but not with imperfective markers *zai* and *zhe*. The telic account is arguable. For an event to be telic, it must have a natural endpoint. For example, in an

accomplishment predicate such as *build a house*, the endpoint is the point when the house is built. However, the endpoint is not clear in phrases such as *pao ge bu* 'have a run'. Another crucial example lies in stative verbs such that *hui ge yingwen* 'come to know English' is obviously not a telic event. Moreover, telic events can have the progressive form such as *he is building a house*, while V *ge* XP cannot. The issue of the progressive should be further studied.

3.3. Shu (2007, ms): The clitic analysis

Based on the morpho-syntactic perspective, Shu (2007, ms) proposes that the verbal *ge* is a clitic. This analysis seems to be plausible due to the fact that *ge* is always postverbal. However, the clitic analysis of *ge* cannot explain examples such as *chi ta ge guoyin* 'eat to one's heart's content', where *ta*, instead of *ge*, is much closer to the verb. In addition, the interpretation of *ge* and the associated XP is not clear under his analysis.

CHAPTER 4

THE PROPOSAL FOR *GE* AND ITS INTERPRETATION

In this chapter, based on Doetjes (1997)'s analysis of quantification, *ge* is proven to be a degree quantifier. In addition, from the semantic perspective, every phrase is demonstrated to specify a quantity or degree on a scale, and *ge* indicates the minimal part on the scale of XPs. In other words, *ge* denotes a unified degree quantificational meaning in the various types of phrases.

4.1. A Plausible Account: A diminutive marker

The trivial reading of V *ge* NP can be related to the diminutive analysis by Lin (2001). However, Lin's definition of diminutiveness is unclear and thus needs further examination. On the other hand, Jurafsky (1996) provides a precise semantic account for the diminutive from the cross-linguistic data. He uses different mechanisms to explain diminutives with widely varying senses such as small size, affection, approximation, intensification, imitation and female gender. Within the analysis, he also introduces the lambda abstraction specification to account for the quantificational meaning and second-order predicates in the diminutive.

The logical form of second-order predicates is presented as (87).

(87) dim *(point x, scale y)* = lower than x on y (Jurafsky1996: 555)

For the diminutive, the concept is 'small *(x)'* is lambda-abstracted to 'lambda*(y),'* meaning smaller than the prototypical exemplar *x* on the scale *y* (Jurafsky1996: 557). Each diminutive sense has additional constraints of the type of the scale of *y*. Therefore, the lambda abstraction is followed by the respecification of the type of predicates, illustrated in Table 4.1.

Table 4.1 Second-order diminutives [8]

ARGUMENT	EXAMPLE	IMPLICIT SCALE	SENSE
Mass nouns/Plurals	*Snow→grain of snow*	Scale of amount	partitive
Gradable Predicates	*Red→ reddish*	Scale of redness	approximation
Count nouns	*Horse→ main part of horse*	Scale of size	resemblance
Deitics	*Here→ soon*	Scale of deictic extent	exactness
Durative Verbs	*see→glance*	Scale of temporal extent	briefness
Propositions		Scale of illocutionary force	hedging

(Adopted from Jurafsky1996: 559)

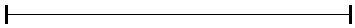
The interpretation of *ge* in V *ge* XP is similar to some types of diminutive senses mentioned by Jurafsky (1996).

First, consider the exactness sense. Mexican Spanish *ahora* 'now' has the diminutive form *ahorita*, meaning 'just now, right now' (Jurafsky 1996: 550). In the example *Here+DIM→ soon*, via the metaphor time is space, diminution converts the extended regions of time to points, producing expressions such 'right now.' Therefore, in the semantic stipulation, the second-order predicate 'exactly (p(x))' modifies predicates such as 'at-time(*x*)' or 'at-place(*x*)'

8 In the original version of the table, the examples only include arguments such as *snow*, I add the sense marked with diminutive such as 'grain of snow' for clearer understanding.

on the scale of deictic extent.

The exactness sense may be associated with V *ge* AP. For example, the meaning of *chi ge guoyin* is to reach the certain point of being *gouyin* 'satisfied'. This can be illustrated by the example (88) as follows. In (88a), *here* can be presented as an extended region of time. Then, the diminutive converts the region to certain points, which is presented as the square of (88b). That is the meaning of *soon* 'right now'.

(88) a. *here* 

b. *soon* 

In the same way, *guoyin* 'satisfied' can be presented as a state as in (89a). Then, *ge* converts the extended scale of that state to a certain range as in (89b). More specifically, *ge* denotes that the minimal point of 'satisfied' must be achieved. This idea will be further explored in Chapter 4.

(89) a. *gouyin* 'satisfied'

b. *chi ge gouyin* 'eat to the point of being satisfied'

One type of pragmatic diminutive is called “hedging” (pp 556-557). For example, the diminutive sense 'only' is used not to modify the number itself, but to express a metalinguistic

comment. Thus, *just five fish* includes the two speech acts: (i) an act of asserting 'five fish,' and (ii) an act of asserting that 'five' is a small or insignificant number.

By contrast, in the case of V *ge* NumP, the forward and backward denotation of *cai* 'just' can denote relatively small as in (90a) or big as in (90b) in the subjunctive mood. Thus, it is not clear whether NumP denotes a small or insignificant number. Rather, intuitively V *ge* NumP denotes senses such as approximation or exactness, which will be also discussed in Chapter 4.

(90) a. Ni cai chi ge yi liang kou hui bao ma?
you just eat GE one two morsel will full Q?
'You just eat one or two morsels. Will you feel full?'

b. Wo dei xie ge qi ba shi ye cai neng biye.
I must write GE seven eight ten page just can graduate
'I have to write seventy and eighty pages, and then I can graduate.'

Another type of diminutives of propositions is called pragmatic diminutive, used in softening a request, such as Japanese *chotto* 'a little'. It can be also used when speakers desire to minimize the impact of a statement. The usages are summed as follows:

(91) The pragmatic diminutive
a. to soften a command, such as Japanese *chotto*
b. to make the request less important or obligatory

Since V *ge* NP also denotes triviality, it may correspond to 'small' on the scale of importance. Consider the examples discussed above, is it possible to treat *ge* as a diminutive marker? The

properties of *ge* can be examined from the morphological, phonological and semantic perspectives.

Based on morphology and phonology, according to Jurafsky's definition, the prototypical meaning for DIMINUTIVE is (at least) small. The diminutive is realized in various kinds of forms in morphological devices: affixes; shifts in consonant, vowel, or lexical tone; and changes in noun-class or gender. (Jurafsky 1996: 534)

Consider Chinese diminutive markers. In most northern dialects of Chinese, the well known diminutive suffix is *-er* 'son' (e.g. Chao 1968: 229-243). The *-er* can be suffixed to a noun to mean 'small,' such as *tuo-er* 'rabbit' and *mao-er* 'hat' (Lü 1980 :191). In addition, adding the diminutive marker *-er* to word finals can create a phonological process known as *erhua* 'rhotacization' (c.f. Sun 2006).

However, compared with the diminutive marker *-er*, there is no concrete evidence either in morphology or phonology to claim that *ge* is a diminutive marker. For example, *ge* is not a suffix to verbs since the insertion of *le* and *ta* is allowed as in *die le ge si jiao choa tian* 'fall one one's back,' and *he ta ge bu zui bu gui* 'drink to be totally drunk.' In addition, there is no phonological change in the insertion of *ge*.

The second piece of evidence comes from the semantic interpretation. Jurafsy's (1996) approach that the lambda-abstraction is in the secondary predicate of the diminutive marker may apply to V *ge* NP, denoting the trivial meaning, as in (92).

(92) Women yichi qu chi ge fan, liao ge tian ba!
We together go eat GE rice, chat GE chat SFP
'Let's go to have a meal and have a chat together!'

In addition, *ge* can also be combined with other categories such as adjectives, as in the

examples in (93).

(93) he ge guoyin

drink GE satisfied

'drink satisfactorily'

At this point, one can interpret the example (93) in one of two ways. A first possibility is to assume that there are two different forms of *ge*. One of these is a diminutive marker and is interpreted through lambda-abstraction of verbal argument in scale of illocutionary force, and the other is a quantifier or some marker which is interpreted by a different mechanism. Alternatively, one can assume that there is only one *ge* in V *ge* XP constructions, which is always interpreted in the same way in that *ge* always selects one type of phrase or always lambda-abstracts an argument on a scale.

The second approach is more general, and therefore must be preferred to the first. In later discussion, it will become clear that a unified approach is even more desirable.

It is concluded that, though V *ge* NP denotes trivial meaning, *ge* is not clearly a diminutive marker from the morphological and phonological evidence, but is plausible from the semantic interpretation. An additional question concerns how to account for other types of phrases under the diminutive analysis.

On the other hand, the diminutive in secondary predicates can be considered as marking "small." Such an idea may relate to quantification, in which a quantifier quantifies nouns in limiting the quantity of nouns. Therefore, quantification should be considered.

4.2.Theoretical background

4.2.1. DQs: Categorial underspecification, theta-selection and adjunction

Doetjes (1997) studies the selectional restriction of quantifying expressions (henceforth, Qs) in different contexts and thus provides a classification of Qs based on their selectional properties, illustrated as follows.

Table 4.2 Four classes of Qs

Classes of quantifying expression	**Selectional restriction**	**Examples (in French)**
(i) Degree Quantifiers, or DQs	Both VP and NPs	*Beaucoup* 'a lot'
(ii) Adverbs of Quantification, or Q-adverbs	VPs	*Souvent* 'often'
(iii) Adnominal Quantifiers, or AdnQs	NPs	*Plusieurs* 'several'
(iv) Floating Quantifiers, or FQs	NPs	*Tous* 'all'

(From Doetjes 1997: 103-104)

In addition to the distributional differences between Qs, Doetjes also addresses two types of selection: (i) categorial selection and (ii) theta selection. The former is similar to a head-complement selection, where a head categorially selects one category. For example, the adnominal quantifier *plusieurs* 'several' selects only NPs. For the latter, Qs, which can occur in different contexts, actually lack category selection and behave like an adjunct, such as degree quantifier in Table 4.2. More specifically, degree quantifiers do not have categorial selection since they can occur in different categories like VP such as NP. Instead, DQ theta selects a scalar theta position which can be saturated through identification (Doetjes1997:92). In other words, each categorial context must contain a scalar theta position for DQs to

saturate, such as *q*(uantity)-position in VP and NP, and *g*(rade)-position in AP.

As discussed in Chapter 2, *ge* can co-occur with different phrases, and the property of indifference to categorial selection is quite similar to degree quantifiers at the first sight.

4.2.2. Types of DQs

Since *ge* may correlate to DQs, they are further examined here. The following table is an overview of DQs based on Doetjes (1997: 103-104).

Table 4.3 Types of DQs

	Deg-heads (categorically select AP)	Degree Quantifiers (lack categorial selection and combine with phrases containing an open scalar argument position which they saturate through identification)			
		Simplex /adjectival (selected by an covert or overt Deg-head)	complex (contain a Deg-head)	classifier constructions (lost the property of categorically selecting an NP)	former high degree adverbs (may be used as quantifiers, contrary to high degree adverbs in other languages)
French	*Si* 'so'; *aussi* 'as'; *très* 'very'	*Peu* 'little'	*Plus* 'more'; *trop* 'too much'; *Suffisammnet* 'enough'	*Beaucoup* 'a lot'; *un peu* 'a bit'	*Énormément* 'enormously; a whole lot'
English	*Too; -er; so; as*	*Muchl; little*	*More; enough*	*A lot; a bit*	—
Dutch	Te 'too'; -er '-er'; even 'as'	Veel 'much', weinig 'little'			—

(Adopted from Doetjes1997: 103-104)

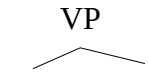
DQs with classifier constructions, such as *a lot*, which consists of a classifier and an indefinite, are particularly noteworthy. They can indicate a non-specific amount. In addition, they do not allow preceding cardinal numbers. For example, it is meaningless to say *two lots/three lots*, except that *lot* denotes its original lexical meaning of 'parcel.' Deotjes further points out that the classifier originally indicates a specific amount and then becomes able to

indicate a non-specific quantity, which is either relatively big (*a lot*) or small (*a bit*) (Doetjes 1997:99-100).

4.2.3. DQs in different lexical contexts

As mentioned, Doetjes (1997) claims that DQs are adjuncts based on their insensitivity to categorial selection. Given the adjunct property, she assumes a basic configuration for DQs with respect to VP, illustrated in (94).

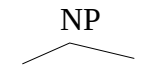
(94)



(Doetjes1997:118)

In addition, the configuration can be extended to the DQ in the NP context, such as (95).

(95)



Given the underspecification analysis of DQs, Doetjes (1997:139) concludes that a DQ must be adjoined to a maximal projection which contains a scalar argument position that can be saturated through identification by the DQ.

4.3. The proposal: *ge* is a DQ

According to Doetjes' (1997) definition that a DQ with a classifier construction consists of a classifier and an indefinite, the corresponding cases in Mandarin Chinese are *yi xie* 'some' and

yi dian 'a bit' based on two syntactic properties:

(i) They are composed of an indefinite *yi* 'a' and a classifier *xie* or *dian*.[9]

(ii) No preceding numbers are allowed. **Liang/san xie* 'two/three bits"; **liang/wu dian* 'two/five bits,' except that *dian* expresses the original sense 'dot,' illustrated in (96).

(96) a. Zheli you yi *liang/ *san xie shu keyi cankao.
here have one * two/ *three bit book can refer
'There are a bit/*two/*three bit of book for reference.'

b. He yi/*liang/*wu dian shui, xiuxi yixia.
Drink one/*two/*five bit water, break a while
'Drink a bit of water and take a break.'

In fact, *ge* possesses similar properties. The cardinal numbers cannot precede *ge* in the postverbal position, as in (97).

(97) a. Women yiqi qu san ge bu.
we together go walk GE path
'Let's take a walk.'

b. *Women yiqi qu san liang/san ge bu
we together go walk two/three GE path

From the above example, it seems that *ge* loses the function of counting and that of indicating a specific quantity. Instead, *ge* indicates a non-specific quantity, more precisely, a very small quantity, or a minimal quantity. The issue of the minimal quantity will be discussed later.

9 There is perhaps some debates regarding considering *yi* 'one' as an indefinite. Further arguments can be seen in Hsieh 2008. But here I tend to find a corresponding case in Chinese to examine Doetjes' (1997) arguments.

In addition, Doetjes argues that it is a rather gradual process for a classifier construction to become a DQ, illustrated as follows.

(i) At first, the concrete meaning of the classifier gets lost in certain uses of the classifier. Classifiers still select an NP and impose some further lexical restrictions on this NP.

(ii) In the second stage, they lose their property of being a categorical selector, and are able to combine with other categories than NPs.

(Doetjes1997: 101)

Given the transformation from a classifier to a DQ, it seems reasonable to propose that *ge* is a DQ, undergoing a similar change. First, *ge* was originally used as a classifier in (98). Second, *ge* is incompatible with preceding cardinal numbers, as in (99) and the classifier-like *ge* does not denote the specific quantity of NPs such as *yu* 'fish' and *jiao* 'sleep.' Finally, it can be used to combine with other categories such as APs in (100).

(98) yi ge liwu
one GE gift
'a gift'

(99) a. diao ge yu
fish GE fish
'go fishing'

b. shui ge jiao
sleep GE sleep
'Take a sleep '

(100) a. wan ge jinxing

play GE to one's heart's content

'play to one's heart's content'

b. wen ge yi qing er chu

ask GE one clear two clear

'ask very clearly'

In addition to the gradual change, compared with *yi xie* 'a bit' and *yi dian* 'a bit' such as in (101)-(103), *ge* can combine with various arguments, which further supports that *ge* is more likely to be a DQ.

(101) NPs

(i) *xie*

a. *he xie shui* 'drink a bit water,' *nia xie shu* 'read a bit'

b. **liao xie tian* 'have a bit talk,' **shang xie cesu* 'go to the toilet,'

**shui xie jiao* 'have a bit sleep'

(ii) *ge*

a. *he ge shui* 'drink a bit water,' *nia ge shu* 'read a bit'

b. *liao ge tian* 'have a bit talk,' *shang ge cesu* 'go to the toilet,'

shui ge jiao 'have a bit sleep'

(102) NumPs

(i) *xie*

**mai xie liang/san ben shu*

(ii) *ge*

*mai ge liang/san ben sh*u 'buy two or three books'

(103) APs

(i) *xie*

**chi xie guoyin*

(ii) *ge*

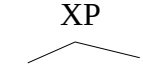
chi ge guoyin 'eat to one's heart's content'

The fact that a classifier can gradually change into a DQ leads to the consideration of *ge* as a DQ with a classifier construction.

4.3.1. The syntactic representation

Doetjes (1997:94-95) suggests that DQs are adjuncts based on empirical facts tested by the *wh*-extraction and the Head Movement Constraint (Travis 1984). The adjunct status is also in accordance with the idea that a head selects at most one category. In other words, adjuncts have no limitation on the category selection. Following that, the basic configuration would resemble (104), where XP can be VP, NP, and AP. Take (105) for example, the DQ *beacoup* 'a lot' modifies the VP *vu da petite soeur* 'seen his little sister'.

(104)



Doetjes(1997:12)

(105) Jean a beacoup vu sa petite soeur. (French)

Jean has a lot seen his little sister.

'Jean has visited her.'

Despite Doetjes' adjunct analysis of DQs, we cannot jump to the conclusion that in Mandarin Chinese the DQ-like *ge* is an adjunct without careful scrutiny.

Theoretically, there are two possible positions for *ge*, either a head or an adjunct. I propose that, though *ge* shares some properties of DQs mentioned previously, *ge* is a head instead of an adjunct based on the following facts.

First, the test used by Doetjes (1997:94) such as *wh-extraction* of French *combien* 'how many/much' cannot be applied to *ge*. *Ge* is not a *wh*-word and *ge* can not be extracted or stranded, such as **chi ge* 'eat GE' or * *ge chi fan* 'GE eat rice.'

The other test by Doetjes (1997:94) is the head movement constraint (Travis 1984), which blocks movement of a head across an intervening head position, as shown in (106).

(106) [$_{IP}$ Sylvie [$_{IP}$ danse$_i$ [$_{VP}$ beaucoup [$_{VP}$ t_i la salsa]]]]

Sylvie dances a lot the salsa

'Sylvie dances salsa a lot.'

However, the head movement constraint is not problematic since no movement is involved when *ge* is assumed as a head selecting its arguments, as illustrated in (107).

(107) [$_{VP}$ tiao [$_{DQP}$ ge [$_{NP}$ wu]]]

dance GE dance

'have a dance'

Finally, Doetjes claims that DQs are adjuncts based on the idea that adjuncts are not restricted

to categorial selections. At the first sight, the example (108) shows that *ge* is not sensitive to categorial selections since nouns in (108a) and adjectives in (108b) are both acceptable.

(108) a. Wo huan ge yifu, mashang jiu hao.
I change GE clothes, suddenly just fine
'I just want to change clothes and it will be done immediately.'

b. Baihuogongsi quanmian tejia, yao rang xiaofeizhe mai ge tongkuai
department store overall sale, want let consumers buy GE satisfied
'Everything in the department is on sale, and consumers can make satisfactory purchases.'

However, are nouns and adjectives so different from each other? By the analogy with the distinctive features of phonology (cf. Chomsky ans Halle 1968), Chomsky (1965) suggests syntactic categories might not be primitive units, but rather primitive syntactic (i.e., categorial) features. Chomsky (1974) further suggests that the four word categories can be distinguished by just two binary syntactic features, namely [±N] (nominal/non-nominal) and [±V] (verbal/non-verbal), illustrated in (109).

(109) a. Verb = [+V, -N]

b. Noun = [-V, +N]

c. Adjective = [+V,+N]

d. Preposition = [-V, -N]

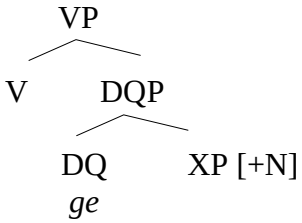
In fact, these associated arguments, either adjectives or nouns, share one common feature, which is [+N]. In other words, the supernatural category "[+N]" comprises N and A. Viewed

in this light, *ge* can be regarded as a head selecting [+N] category, including N and A.

In conclusion, Doetjes' (1997) tests and arguments for the adjunct status of DQs are not threats to the head analysis of *ge*. In fact, the head analysis of *ge* is much preferred.

The proposed basic configuration for V *ge* XP is shown in (110).

(110)

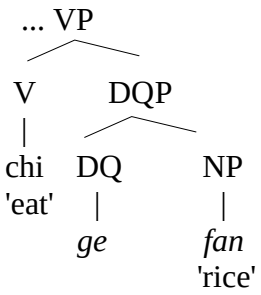


There are a number of reasons to label *ge* as a DQ. One reason is that *ge* has similar transformations to a DQ, which is changed from a classifier and then denotes an uncertain quantity. Another reason is that DQs can saturate the open scalar *q*-position of nouns and the *g*-position of adjectives. Although the head *ge* theta binds [+N] phrases, it saturates different positions with respect to nouns or adjectives. In fact, these positions are not that different since they are both scalar. Last but not least, the other promising term, Adnominal Quantifier, is not chosen since *ge* selects phrases with [+N] features instead of simply nouns.

To sum up, *ge* is a DQ head, theta binding an open scalar position of a [+N] phrase—either a *q*-position of a noun or a *g*-position of an adjective. The structures of each V *ge* XP construction are illustrated as follows.

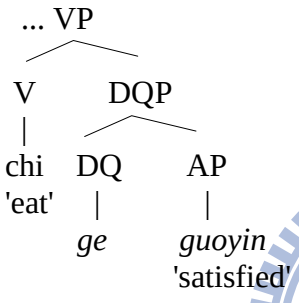
I. V ge NP such as *chi ge fan* 'have a meal'

(111)



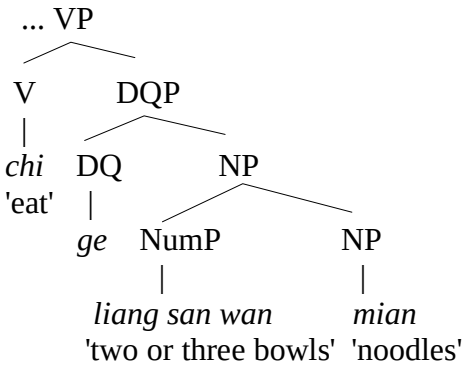
II. V *ge* AP such as *chi ge guoyin* 'eat to satisfaction'

(112)



III. V *ge* NumP such as *chi ge lian san wan mian* 'eat two or three bowls of noodles'

(113)



The numeral can be understood as a cardinality marker. The numeral modifiers used in the V ge NumP construction have a predicative function only (cf. Hoeksema 1983a, and Van Geenhoven 1998:44 argues that an instrumental numeral modifier has a predicative but not a partitive function in Greenlandic data.) Apparently, the DQ *ge* only quantifies numeral

phrases. In fact, *ge* combines with cardinal predicates such as numeral phrases *liang/ji ben shu* 'two/several volumes of books', but not with nouns modified by other quantifiers, either weak or strong and demonstratives *zhe/na* 'this/that.'

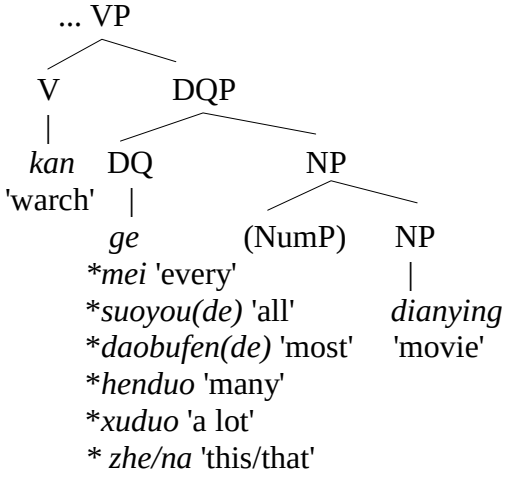
The head analysis of *ge* can account for the problems mentioned in Chapter 2. The definiteness effect mentioned in (17) and repeated here as (114) can be solved since *ge* and other quantifiers all occupy the head position and select a NP argument, as illustrated in (115). In other words, they are in the complementary distribution.

(114) a. kan ge dianying
watch GE movie
'watch a movie'

b. kan ge suoyou (de)/mei yi bu dianying
watch GE all DE/every one Cl movie
'watch all/every movie(s)'

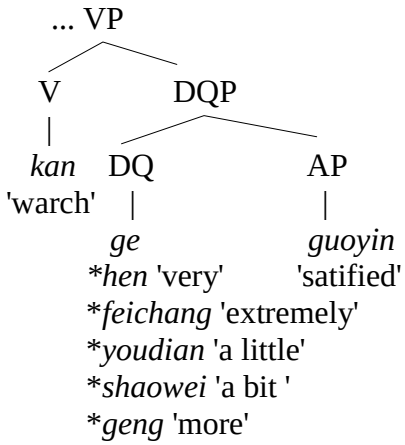
c. kan ge zhe/na bu dianying
watch GE this/that Cl movie
'watch this/that movie'

(115)



Second, it can explain the fact that degree modifiers are not allowed, as in (116). The DQ *ge* is incompatible with other degree adverbs in the head position.

(116)



Third, ge cannot be stranded since a head must select an argument. Examples of both transitive and intransitive verbs in (117) and (118) further support this account.

(117) a. * kan ge

see GE

b. kan dianyin

see movie

'watch a movie'

c. kang ge guoyin

see GE satisfaction

'watch satisfactorily'

(118) a. * xiao ge

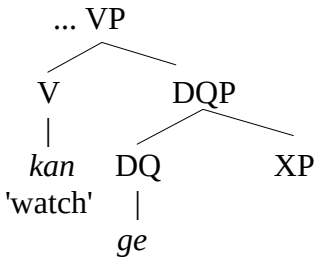
laugh GE

b. xiao ge ban si

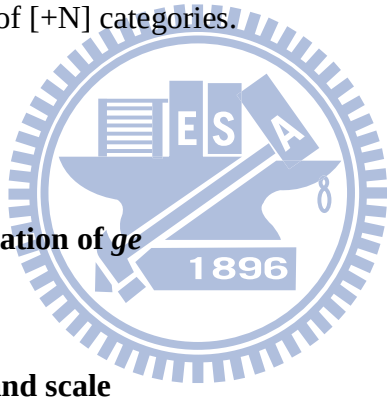
laugh GE half die

'laugh widely as being half dead'

(119) *



From the overall discussion of the syntactic perspective, *ge* is concluded to be a DQ, head selecting phrases composed of [+N] categories.



4.4. The semantic interpretation of *ge*

4.4.1 Preliminary: degree and scale

Previously, in the syntactic aspect, *ge* was analyzed as a DQ denoting an uncertain quantity that is minimal; and *ge* can saturate a *q*-position of nouns and a *g*-position of adjectives. The next question that arises is how to interpret *ge* from the semantic point of view. A good place to start is to examine the *g*-position because adjectives inherently acquire degrees and scales. The approach I assume here is based on Kennedy & McNally (1999 and 2005). Kennedy and McNally (2005) provide a brief definition of degree and scale:

Gradable adjectives map their arguments onto abstract representations of

measurement, or DEGREES, which are formalized as points or intervals partially ordered along some DIMENSION (e.g., height, cost, weigh,...). The set of ordered degrees corresponds to a SCALE....

(Kennedy and McNally 2005:349)

Given that definition, gradable adjectives are assumed to contain a set of degrees on a scale, illustrated in (120), where the mark '+' represents different ordered degrees which can be low or high on the scale.

(120) Gradable adjectives

_____

\+ + + + + +

However, the above configuration is too rough since the scale may or may not have maximal and minimal elements for adjectives to encode different scalar information. Given that, Kennedy and McNally (2005) further propose four types of scale structures as in (121), where *R* and Δ represent the ordering relation and dimension for the scale respectively, and *D* signifies degree.

(121) A typology of scale structures (Kennedy and McNally 2005,)

a. $\langle D_{(0,1)}, R, \Delta \rangle$ (Totally) OPEN SCALE

b. $\langle D_{[0,1)}, R, \Delta \rangle$ LOWER CLOSED SCALE

c. $\langle D_{(0,1]}, R, \Delta \rangle$ UPPER CLOSED SCALE

d. $\langle D_{[0,1]}, R, \Delta \rangle$ (Totally) CLOSED SCALE

In Kennedy and McNally (2005:354), scales that are closed on the lower end include such a

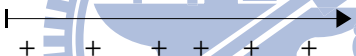
minimal value, equal to 0. Scales that are open on the upper end include all degrees that are near the limit 1. Those closed on the upper end have a maximal degree whose value is 1. Given this definition, scales of different types of APs can be defined as follows.

(122) Adjectives, such as *guoyin* 'satisfied' and *tongkuai* 'joyful,' are of a lower closed scale.

(123) Idiom chunks, such as *yi-qing-er-chu* 'perfectly clear,' are of a closed scale.

Thus, a gradable adjective *guoyin* 'satisfied' contains a set of degrees on a scale that can be illustrated as (124). The mark '+' represents different ordered degrees which can be low or high on the scale of adjectives, such as 'a little bit satisfied′ or 'very satisfied.′

(124) *guoyin* 'satisfied'



On the other hand, idiom chunks have inherent maximal standards. The scale is totally closed.

(125) *Yi-gan-er-ging* 'thoroughly clean'

(the scale of cleanness)

Kennedy and McNally (2005) further distinguish the relative standard and context-free standard. For the latter, adjectives inherently contain maximal or minimal standards regardless of context, illustrated in (126) and (127).

(126) Adjectives with inherent minimal standard:

open, bent, awake

(127) Adjectives with inherent maximal standard:

full, closed, straight

The idea of the maximal/minimal context-free standard can also refer to Rothstien and Winter's (2004) 'total' vs. 'partial' predicate distinction on the scale structure. Roughly speaking, a total predicate is one such as *straight*, which is true if the object has a maximal degree of straightness. While a partial predicate is one such as *bent*, which is true if the object has some degree of bentness.

Similar to the total predicate *straight*, adjectives in V ge AP have context-free maximum standards. Take the idiom chunk *yi-gan-er-jing* 'thoroughly clean' for example. The state has to be completely clean thus can be called *yi-gan-er-jing* 'thoroughly clean.' The observation proves that the property of high degree in a V ge AP construction is not derived from *ge* but from APs themselves. In other words, the lexical meaning of these adjectives inherently denote high degree. Obvious examples are from idiom chunks as mentioned above. For other adjectives such as *guoyin* 'satisfied,' *tongkuai* 'joyful' and *lanzui* 'dead drunk,' they denote high degree reading compared with other adjectives. Therefore, it is obvious that *ge* does not denotes high degree by itself, though *ge* may involve degree modification.[10]

By contrast, nouns are unlike *g*-position which has inherent degree and scale. Doetjes (1997:43) argues that the scalar property of the *q*-position of nouns is derived based on her assumption that a plural formation can make the *q* scalar. The plural account of which can be referenced in Chierchia (1998).

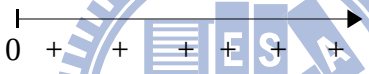
Though Chinese bare NPs such as *shu* 'book' and *shui* 'water' are considered to be mass nouns (cf. Chierchia 1998 and Doetjes 1997), they may also have *q*-position since, under

10 Zhu (1982) considers that *ge* denotes high degree in the adjectives. Others such as Wu (2002), Biq (2002) and Shu (2007) hold the same assumption. On the other hand, Shi (2006) argues the high degree expression is contributed to the adjectives. However, it is undeniable that, in V *ge* AP construction, high degree expressions such as idiom chunks frequently occur with *ge*. For the reason, it is worth further studies.

Doetjes' definition, only singular NPs contain the *r(eference)*-position, or non-scalar *q*-position.

Given the above assumption, Chinese bare NPs also have scalar *q*-positions. In other words, nouns have a scale of quantity by definition. Therefore, I propose that the scale of nouns can be considered quite similar to that of adjectives, illustrated in (128). The mark '+' represents different quantities which can be small or big on the scale of *shui* 'water.' The scale is closed at the lower end since the bottom end for the quantity is the zero point, which means no existence of such quantity of nouns. Its upper end is open since there is no upper limit for the quantity.

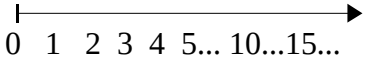
(128) *shui* 'water', *shu* 'book'



In a similar way, for the case of NumPs, numerals are assumed to have a scale with a set of ordered numbers, which is closed at the lower bound as well, as in (129).

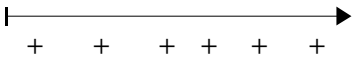
(129) [*Number*]-wan (fan)

CL-bowl (rice)



Therefore, it is concluded that each phrase in V *ge* XP, such as AP, NP, or NumP, contains a scale corresponding to either degree or quantity and such a scale is closed at the lower end (regardless of whether the upper end is closed or not). The basic configuration for XP assumed is as (130).

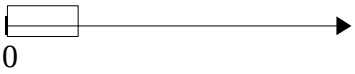
(130) XP



4.4.2 The semantic account: *ge* denotes the minimal part of the scale

The DQ *ge* selects an argument with a quantity scale or a grade scale and indicates the minimal part of the property excluding the zero point of a (lower) closed scale, as in (131).

(131)



If the event is involved, the stipulation will change into something resembling (132).

(132)

The interval from zero (0) to one (1) signifies that the event is executing and it then culminates at 1, where a property such as the state of *guoyin* 'satisfied' exists.[11] Such an idea is also similar to the value transition proposed by Van Wyngaerd (2001) that adjectives involve a change of value on a bounded scale and such transitions are found with resultatives. The transition of values is illustrated in (133).

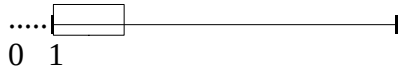
(133) 0-----1/2-----α-----1 (Van Wyngaerd 2001:73)

For example, *chi ge guoyin* 'eat GE satisfied' means that the eating event culminates and the

11 The idea of culmination may refer to Parson's (1994) event semantics.

state of *guoyin* 'satisfied' is achieved. More precisely, on the scale of *guoyin*, *ge* only refers to the minimal, interval including the bottom end.

(134) *chi ge guoyin* 'eat to the point of being satisfied'



In addition, for other examples such as *ai ge si qu huo lai* 'love (someone) very deeply,' the idiom represents a closed scale, but it does not affect the denotation of *ge*. The minimal requirement is existence of the state *si qu huo lai* 'very deeply'.

(135) *Ai ge si qu huo lai* 'love very deeply'

In addition, numeral phrases are illustrated in (136)-(138). *Ge* refers to the minimal part of the specific quantity such as *wu* 'five', and then derives 'five' as a whole. In fact, the minimal part of numerals that *ge* denotes is also the maximal part of numerals since the quantity of numerals is defined by numbers such as two, three, or five (See the plurals and maximalization discussed by Landman 1998). The configuration of NumP is shown in (138).

(136) a. Zhe tai che keyi zuo de xia ji ge ren?
this Cl car can sit DE down how CL people
'How many people are allowed in this car?'

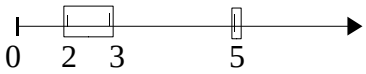
b. Dagai keyi zuo ge wu ge ren.
probably can seat GE five CL people
'Probably five people.'

(137) Wo chi ge liang san wan hongdou tang jiu bao le.

I eat GE two three bowl red beans soup just full ASP

'I ate two or three bowls of red bean soup and I was full.'

(138)



V *ge* (bare) NP, where *ge* indicates the minimal part on the scale of quantity of NP, is now examined, see (139). It is noted that the zero point of the scale is not included in the denotation of *ge*.

(139) (*shui) jiao* ' a sleep'

It should be noted that the minimal requirement of the cognate NP will influence its corresponding verb since they have homogeneous meaning, especially in idiom chunks such as *shui-jiao* 'sleep a sleep,' *liao-tian* 'talk a talk,' *you-yong* 'swim a swim,' and *jie-hun* 'marry a marriage'. The idea is related to homomorphism, which is formally captured by Krifka in terms of mapping to objects and mapping to events, and defined as a characteristic of thematic role *R* as follows (Krifka1989: 92).

(140) a. Mapping to objects

$$\forall R\,[\text{MAP-O}\,(R) \leftrightarrow \forall e \forall e' \forall x\,[\,R\,(e, x) \wedge e' \subseteq_{E} e \rightarrow \exists x'\,[\,x' \subseteq_{O} x \wedge R(e', x')\,]]]$$

MAP-O guarantees that all sub-events *e'* of a given event *e* with participant *x* in role *R* involve

a part *x'* of *x*. The opposite direction is mapping to events. Typical examples are verbs with incremental themes such as *eat* and *drink*. While the eating event is executing, the amount of the food such rice which is eaten will increase and vice versa. This shows that the relationship between verbs and nouns are quite close and they will impact each other. By extending this idea, a homomorphic relation between the theme argument (or the noun) and the corresponding event (or the verb) is shown responsible for the whole VN compound to receive the minimal requirement.

The account of homomorphism can be also applied to other V-N compounds and V-O structures such as *chi-fan* 'eat rice,' *duo-shu* 'read books,' *chou-yan* 'smoke a cigarette,' *he-shui* 'drink water,' and *shang-cesuo* 'go to toilet.'[12] Consequently, the whole VP acquires the minimal denotation. A minimal event which may contain sub-elements such as minimal quantity and minimal duration may extend the minimality to the illocutionary force such as importance, thus trivial reading is derived pragmatically. The minimal analysis can explain the frequent occurrence and ungrammaticality of certain contexts. For example, phrases with positive extension such as *zhongda* 'important' and *duo* 'more' do not cooccur with V *ge* NP.

(141) a. *Jie ge hun zheme zhongda de shi, zenme neng bu jinshen?
marry GE marriage such important DE thing, how can no careful
'Getting married is such an important thing. How can you not be careful?'

b. Jie ge hun, zhe dian xiao shi, you biyao zheme puzhang-langfei ma?
Marry GE marriage, this bit small thing have necessity such extravagant Q?
'Is it necessary to be that extravagant just to get married ?'

12 The distinction of V-N compound and V-O structure is discussed in Chapter 2. However, the distinction is not that clear. As long as the NP is bare, it is closer/more adjacent to the verb, and thus easier to be influenced.

(142) a. *Ge ge ming zheme zhongda de shi, zenme bu cong zhang
revolute GE revolution such important DE thing, why not from long
jiyi ne?
plan SFP
'A revolution is such an important thing. Why not plan carefully?'

b. Ge ge ming zhe dian xiao shi you name nan ma?
revolute GE revolution this bit small thing have that difficult Q?
'A revolution is such a small thing. Is it that difficult?'

(143) a. ??Duo nian ge shu, bijiao hao zhao gongzuo.
more study GE book, comparably good find job
'Studying more is easier to find jobs.'

b. ??Duo chou ge yan, bu hui zenyang.
more smoke GE cigarette, no will how
'Smoking more will not have any effects.'

c. Shao chou ge yan jiu keyi duo huo ji nian.
less smoke GE cigarette just can more live several year
'Smoking less and you will live more years.'

Why does the minimality of AP not influence its verb? The result state is not a real internal argument of a verb, and therefore it is not as easy as bare NPs.[13] The result state is also clear and exact. In addition, the numeral phrases have specific quantity, the minimality effect *ge* results in almost the same quantity, but differs only in intensifying the collectivity of the quantity.[14] In the phrase *he ge liang sang bei kafe* 'drink two or three cups of coffee,' the

13 An internal argument is the complement which is obligatory for a verb. For example, *pingguo* 'apple' is the internal argument of verb *chi* 'eat,' while *guoyin* 'satisfied' is not.

14 The collective denotation may refer to Liu (2004), where he considers *ge* as a group classifier functioning

quantity is 'two or three' and the minimal part is 'two or three.' The minimality effect seems to be weakened in the case of numerals. Therefore, *ge* is not strong enough to impact the verbs. However, this possibility should not be excluded. Moreover, it is likely that the minimality of *ge* may influence the verbs to some extent in the case of APs and NumPs.

An additional question about definition regards why the term “minimal” is used instead of “diminutive” as discussed previously. Diminutive means 'small' but it must define a standard for what is considered as small. “Minimal” used here also implies 'small,' but includes at least the minimum standard for the existence of the property, which is more concrete.

like a parcel packing in the case of V *ge* NumP. He also uses *zonggong* 'altogether' for the collectivity test.

CHAPTER 5

CONCLUSION

To sum up, based on Doetjes' (1997) analysis of quantification and selection, I argue that *ge* gradually changes from a classifier denoting a specific quantity or a unit into a degree quantifier, i.e., DQ, denoting an uncertainty quantity─ more specifically, a minimal quantity or degree. This proposal can account for the diachronic change of *ge* and its correlation with classifiers. Instead of the adjunct status of DQ, I propose that *ge* is a head which theta binds phrases with [+N] features such as nouns and adjectives. The head status of *ge* can explain the DE raised in the context of nouns and the co-occurrence restriction with other degree modifiers in the context of adjectives.

From the syntactic point of view, an adjective contains a scalar degree while a noun involves a scalar quantity. The function of *ge* is to denote the minimal part of the degree or quantity on the scale. In V *ge* NP, the minimal meaning of the NP influences its verb and thus a trivial reading is derived for the whole VP. On the other hand, since a NumP contains a specific quantity, the minimal part is the numeral itself, and thus *ge* indicates such a quantity with respect to the numeral. In V *ge* AP, the minimal requirement for the true condition is at least the existence of the adjectival state.

Overall, this thesis provides a unified analysis from both syntactic and semantic perspectives. However, many issues remains unexplored. One important issue concerns pragmatic factors. For instance, in what contexts will people use the V *ge* XP construction? The data shows that

the construction usually appears in imperatives and intentional contexts. Whether there are certain licensing conditions or whether *ge* is a polarity item; such questions require further investigation in future studies.

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