THE INTERACTION BETWEEN

SPEAKER-ORIENTED ADVERBS AND

SENTENCE FINAL PARTICLES

IN MANDARIN CHINESE

——A CORPUS-BASED APPROACH

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─A Corpus-Based Approach

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Abstract

This dissertation aims at providing a semantic and pragmatic analysis on sentence final particle--*ne* in Mandarin Chinese. Under the framework of Zhu's (1982) classification and Rizzi's (1997) Split-CP hypothesis, we believe final particles in Chinese occupies different layers within the CP domain, The outmost layer of *ne* is used to express speaker's attitude and evaluation towards the propositional content.

At the same time, we find a specific type of adverbs, namely, speaker-oriented adverb, encoding speaker's attitude information as well. Corpus data also prove that co-occurrence of speaker-oriented adverbs and sentence final particles are not random, in a sense that co-occurrence of certain type of adverbs final particle *ne* is quite frequent. The top three adverbs are *qishi, guaibude* and *shenzhi.*

Our preliminary observation proves that *ne* is used to mark new, unexpected information and should be used under intersubjective context, the speaker's belief and intention, including speaker's belief and intention towards the hearer characterizes the usages of sentence final particle *ne.*

Speaker-oriented adverb *shenzhi* indicates that the following

constituents are at the endpoints of the scale in that they are the least likely to be true, hence its being true is unexpected. *Guaibude* is used to mark speaker's sudden realization of causality, this causal relation either is unexpected for the speaker or for the hearer from the speaker's view. *Qishi* is used fundamentally to mark the contrastive relation, and this relation is contrary to the speaker or the hearer previous expectation as well.

Our research proves that these seemingly disparate adverbs do have one thing in common: they all mark some unexpected information, and the high frequency of co-occurrence of theses adverbs with *ne* is justified.

Since the meaning and usage of sentence final particles is difficult to pin down, our research opens a new window by exploring the interaction between final particles and speaker-oriented adverbs. Hopefully our research will motivate future research on other final particles both in Chinese and cross-linguistically.

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I would also like to thank Prof. Chunli Zhao. The idea of this dissertation originally came from his discussion with me in our once-every-two-week group meeting. In the process of dissertation writing, I often came up with the naïve thinking that the topic of particles was too small to support a doctoral dissertation and almost on the verge of giving up. Prof. Zhao encouragement and more importantly, his publication on the similar topics convinced me that the research potential on Chinese sentence final particles is unlimited.

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List of Abbreviation

1 SG	First person singular pronoun
1 PL	First person plural pronoun
2 SG	Second person singular pronoun
2 PL	Second person plural pronoun
3 SG	Third person singular pronoun
3 PL	Third person plural pronoun
ASP	Aspect marker
BA	Marker of disposal construction *ba*
BEI	Passive marker *bei*
CAI	Focus marker *cai*
CL	Classifier
DE	Prenominal modifier maker, post-verbal resultative marker, SFP *de*
DOU	Distributive operator *dou*
NEG	Negative morpheme
PERF	Perfective aspect marker
PROG	Progressive aspect marker
*	Ungrammatical sentence
?	Odd sentence
A>B	A dominates B

Chapter 1 Introduction

1.1 Research objectives

The central concern for this dissertation is the semantic property and pragmatic function of the final particle-*ne* in Mandarin Chinese and how it interacts with certain adverbs.

Sentence final particles (henceforth SFPs) are small elements [1]occurring at the end of an utterance or a sentence. They do not affect the truth conditions of sentences, do not possess a referential or denotative meaning, but are mainly used to express speaker's emotive nuance under specific contexts. They mainly exist in spoken Chinese, although consensus has not been reached with regard to the accurate numbers of SFPs, it's generally recognized that the frequently used SFPs include *a, ba, ma, ne, de, le.* Consider the following examples[2],

(1-1)　　a.　在咖啡店裡，要一杯咖啡，慢慢喝著，對他來說，
　　　　　　　可能是一種享受吧。

Zai	kafei	dian	li	yao	yi	bei	kafei
In	coffee	shop	inside	order	one	CL	coffee
manman	he	zhe	dui	ta	lai	shuo

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slowly	drink	ASP	for	3SG	come	speak
keneng	shi	yi	zhong		xiangshou	ba
possibly	BE	one	CL		enjoyment	*ba*[3]

It is probably a kind of enjoyment for him to nurse along a cup of coffee in a coffee shop.

b. 他脸色惨白，好像多日沒有睡覺，他的确睡不着啊，他在想他痛苦的一生。

Ta	lian	se	can	bai	haoxiang	duo
3sg	face	color	terrible	white	like	many
Ri	meiyou	shuijiao	ta	dique	shui	bu
Day	NEG	sleep	3SG	indeed	sleep	NEG
zhao	a	ta	zai	xiang	ta	tongku	de
ASP	a	3SG	PROG	think	3SG	suffering	DE
Yi	sheng					
One	life					

He looks dreadfully pale. It seems that he has not slept for quite a few days. He could not slept indeed, because he has been reflecting upon his miserable life.

In (1-1) SFP-*ba* and SFP-*a* do not affect the truth-condition of sentences, since they do not add anything to the propositional content. Although their appearance is optional, the deletion of them will make utterances sound unnatural or unlike the authentic Chinese.

Previous studies on the meanings or functions of SFPs, including the formal syntactic approach on their structural

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[3] It is difficult to translate SFPs, and hence we retain the original form of them in the glosses.

positions, often target on the SFPs alone, seldom did they take other elements within the sentences or utterances into consideration.

Our research finds that certain types of Chinese adverbs are used to express speaker's attitude or subjective judgment towards propositional content as well. Examples in (1-1) indicate that SFP-*ba* co-occurs with adverb *keneng* (possibly), SFP-*a* co-occurs with adverb *dique* (indeed).

The analysis and studies on the interaction and correlation between *ne* and certain adverbs will open up a new path and further deepen our understanding towards Chinese SFPs.

This research aims at reaching the following four objectives,

(i)   To provide the justification, on the grounds of syntactic position, semantic property or pragmatic function, for analyzing the co-occurrence between certain adverbs and SFPs.

(ii)   To find out what type of adverbs is compatible with SFPs.

(iii) To illustrate the overall co-occurrence pattern of SFPs and certain adverbs, and select some pairs that have high frequency of co-occurrence;

(iv)   To establish a generalization on the core semantic and pragmatic properties on SFP-*ne*.

1.2 Outline of the dissertation

This dissertation is divided into two thematic halves, "hypothesis" and "realization". The first half (Chapter 2-3) is dedicated to provide justification and hypothesis on interaction between SFPs and certain adverbs. The second half (Chapter4-6) addresses how interaction is realized, with attention being paid to Chinese adverbs, *shenzhi, guaibude* and *qishi.* The following is a brief review for each chapter.

Chapter 2 introduces Zhu's (1982) classification on Chinese SFPs and Rizzi's (1997) "Split-CP Hypothesis". In these theoretical frameworks, it is suggested that Chinese SFPs occupies different positions within the CP domain, and the outmost layer such as *ne, a, ou* is related to speaker's attitude or evaluation. Moreover, review on both English Speaker-Oriented Adverbs (henceforth SpOAs) and Chinese "*Yuqi* (mood) adverbs" prompts us to abandon the long-held label of "*Yuqi* (mood)" and re-define this type of adverbs as Chinese SpOAs, which are used to express speaker's attitude. In the following we will present an overall distributional pattern between SFPs and SpOAs based on corpus data. Since SFP-*ne* has a controversial status and is frequently compared with other particles, our research focus on

ne and three SpOAs frequently co-occur with it, namely *shenzhi, guaibude* and *qishi*.

Chapter 3 starts with a literature review on *ne*, regardless of adhering either to the "meaning maximalism" or "meaning minimalism" approach, the semantic properties and functions on *ne* are still under wide-ranging debate. We offer a preliminary observation on *ne* with the generalization that it is used to mark unexpected information and need to be addressed in interactional contexts, where speaker takes hearer's intention or belief into consideration.

Chapter 4 offers a scalar account on Chinese SpOA-*shenzhi*. It is argued that *shenzhi* is used to designate the boundary or endpoint information on a given scale, and this endpoint information exceeds the commonly accepted assumptions or the interlocutor's prior expectations. The core semantic property for *shenzhi* is summarized as triggering "unexpectedness" accordingly.

Chapter 5 presents a discussion on Chinese SpOA-*qishi*. Incorporating insights in the literature as well as drawing new data from CCL corpus, we propose that despite various interpretations on the surface, *qishi* is used fundamentally to mark a contrastive relation. The proposition following *qishi*

either contrasts with commonly accepted world knowledge or speech participants' expectation. This contrast also reflects unexpected information.

Chapter 6 turns to Chinese SpOA-*guaibude*. The generalization based on corpus data is that *guaibude* is used to mark the effect part in a causal relation, which is established on the basis of speaker's perspective. *Guaibude* indicates that the speaker realizes that the causal relationship is not the one commonly assumed and is therefore unexpected.

Chapter 7 presents the conclusion.

Chapter 2 Interaction between SFPs and SpOAs

2.1 Literature review on SFPs

SFPs have been the research topic for the past several decades, and a sizable body of literature has been devoted to the study of structural properties, historical developemt as well as the semantic or pragmatic properties of Chinese SFPs.

2.1.1 General description on previous works

The earlier time research (Lü 1944, Chao 1968) follows descriptive tradition, listing as many meanings or usages of SFPs as possible. Lü (1944: 204-260) presents an outlined review on Chinese SFPs under his dichotomy between "*chuanxin* (express certainty)" and "*chuanyi* (express uncertainty)". His data includes both modern and ancient Chinese, as for the modern part, SFPs such as *de, le, bale, ne, me, a, ma* are well investigated. Chao (1968: 795-812) provides a list of 28 particles, which include compound particles, phrase particles and sentence particles. He further compares Mandarin particles with those

occurred in the local dialects as well.

Since SFPs are commonly used in colloquial Chinese, with the arise and development of cognitive and functional grammar, later research on SFPs (e.g. Li and Thompson 1981, Shie 1991, Han 1995, Li et al. 1998, Zhang 2003, Chu 2009 and among others) adopts the discourse or conversational analysis approaches, attempting to collapse the descriptive tradition into one generalized, core interpretation for each particle. For instance, Zhang (2003) investigates pragmatic functions of *ba, ne, a* in the discourse contexts. He concludes that *ba* is used to indicate speaker's uncertainty, *ne* is used to associate and contrast relevant propositions and *a* is used to express speaker's sentiments. Chu (2009) examines the discourse functions of *a, ba,* and *ne* under the framework of relevance theory and concludes all of them to be discourse markers.

At the same time, formal syntacticians strive for specifying underlying positions for each SFPs. Lee (1986) is widely considered as the first scholar to claim that yes/no question particle *ma* is the instantiation of a Complementizer/C position, i.e. the head of CP. And since then the analysis of SFPs occupying the C position[4] has become standard in subsequent

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[4] Our research here focuses only on Mandarin Chinese. It is well known that the huge

studies. (e.g. Tang 1989, Cheng 1991, Li 1992 and among others)

Cheng (1991) proposes the well-known "clause typing hypothesis", she points out that every clause needs to be typed. SFP-*ne* is a typing particle for *wh*-questions. She further notices that unlike other languages such as Japanese or Navajo whose question particles can appear in both matrix and embedded clauses, Chinese SFP-*ne* can only appear in matrix clauses.

Rizzi (1997 and subsequent works) demonstrates the "richness" of CP domain and proposes the well-known "Split-CP Hypothesis". Later on, Cinque and Rizzi (2008) advocate the cartographic approach in analyzing the explosion of functional heads identified and implied in syntactic analysis.

Inspired by Split-CP hypothesis, recent works (e.g. Paul 2009, Shi 2009, Tang 2010, Pan 2015) all treat Chinese SFPs as head of functional projection with the CP domain and different orderings of the left periphery are proposed accordingly.

W.Paul (2009) adopts Zhu (1982)'s[5] three-layer classification on Chinese SFPs and proposes the following architecture for the

number of dialects across China, particularly the Cantonese, depends on large inventory of SFPs to express speaker's attitude. Scholars from the formal generative paradigm treat them as occupying the head of complimentizer layer as well. (e.g. Kwok 1984, Law.S 1990, Law.A 2002, Sybesma and Li 2007, Lam 2014, among others).

[5] We wil review Zhu's work in the coming 2.3.1 section. The C_{low} layer in Paul's ordering refers to the innermost layer or C_1 proposed by Zhu, the lowest level interact with elements inside the TP.

CP domain of Chinese,

AttitudeP > ForceP > TopicP > 'even' FocusP[6]> $C_{low}P$ > TP

According to Shi (2009), functional projections and hierarchical structural for Chinese SFPs rigidly follow the ordering below,

IP (tense and aspectual information) > StatusP(*le_2,ne_1,laizhe*) > ForceP (*ne_2,ma,ba_1,ba_2*) > IllocutionaryP (*a,me,ne_3,ou*).

Tang (2010) proposes a new ordering for SFPs in Mandarin Chinese,

TenseP (*le*) > FocusP (*ne*) > DegreeP (*ma, ba*) > IllocutionaryP (*a*).

The recent work on the hierarchy of Mandarin SFPs is conducted by Pan (2015). He further splits Paul (2009) ordering into a cluster of detailed projections. The whole picture of his left-peripephy ordering of SFPs is excerpted as follow.

S.AspP (*laizhe,le*) < OnlyP (*baile,eryi*) < iForceP (*ma, ba,shifou*) < SQP [7](*shenme*, Ø) < AttP1(*ne*) < AttP2(*a,bei*)

In summary, previous research on Mandarin SFPs under the Split-CP hypothesis and the cartographic approach recognizes the

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[6] This refers to Chinese "l*ian..dou/ye* (even)" construction from W.Paul (2003,2005)

[7] SQ here stands for special question, which inlcude rhetorical questions, surprise-disapproval questions and negative *wh*-questions. The idea of adding this layer into the whole picture is largely drawn from the corresponding research on some Italian diaclects. However, it is doubtful whether the status of *shenme* can be treated the same as the rest of the SFPs.

hierarchical nature of SFPs and reveals the generalization that the higher a projection is, the more subjective it is to be interpreted. This constitutes the theoretical backdrop that we will use in our later discussion.

Due to the limitation of space, we are not going to review each of the previous studies in detail, but will instead choose one representative work from these three major different research approaches, they are, Chao (1968) for descriptive tradition; Li and Thompson (1981) for functional approach; Li (2006) for formal syntactic study. I review their works with no intention to exhaustiveness or detail, merely presenting some illustrative examples on which their interpretations of the SFPs have been based.

2.1.2 Representative works on SFPs

2.1.2.1 Chao-Yuan-Ren (1968)

Chao (1968: 795-812) investigates twenty-eight particles in Chinese, which include compound particles, phrase particles and sentence particles. He assigns six different meanings to *le*, ten meanings to *a,* four meanings to *ba*, seven meanings to *ne*. As for *a,* the ten meanings ranging from synatactic makers for different

sentence types to evaluative warning under the current context.

Here are some of his interpretations for *a* and *le.*

(2-1) a. Starting a question
　　　　誰啊？
　　　　Shui　　a
　　　　Who　　*a*
　　　　Who is it?

　　　b. Impatient statement
　　　　我沒做錯啊！
　　　　Wo　mei　zuo　cuo　　a
　　　　1SG　NEG　do　wrong　　*a*
　　　　I didn't do it wrong.

　　　c. Enumeration
　　什麼天啊，地啊，風啊，草啊，這些字全會寫。
　　Shenme　tian　a　di　a　　feng　a　　cao
　　What　　sky　*a*　earth　*a*　　wind　*a*　　grass
　　a　　zhexie　zi　　　　quan　hui　xie
　　a　these　character　　all　can　write
　　Things like heaven, earth, grass, these words, he can write all of them.

(2-2) a. Obviousness
　　這個你當然懂了。
　　Zhe　ge　ni　dangran　dong　　　le
　　This　CL　2SG　definitely　understand　*le*
　　Sure, you know it.

　　　b. Lively enumeration

胭脂了，粉了，鍋了，縫紉機了，什麼都賣。

Yanzhi le fen   le   guo   le fengrenji

Rouge *le*   powder *le*   pot   *le* sewing machine

Le   shenme   dou   mai

le   what   DOU   sell

No matter whether it's rouge, powder, pots, or sewing machine, they sell everything.

Chao's research on SFPs is extraordinarily thorough and attentive to detail. Later research on SFPs all to some extent stands upon the shoulder of his work. However, a major shortcoming for his research, just as the later criticism on this, is that the meanings or functions of SFPs he proposes may not solely come from the SFPs, but are in effect from the context of the sentence or maybe the interaction of both.

2.1.2.2 Li and Thompson (1981)

Li and Thompson (1981: 238-313) research on six frequently used SFPs: *le, ne, ba, a, ma,* and *o.* They propose the unique characterization for each particle. *Le* is used to signal a "*currently relevant state*". *Ne* is used as "*response to expectation*", speaker calling on the hearer to pay particular attention to information convey by the sentence. *Ba* is glossed as "*solicit agreement*", solicit the approval or agreement from the

hearer. *Ou* is used as "*friendly warning"*, to soften a command or initiate a friendly warning. *A* is charactered as "*reduced forcefulness"*, i.e., to soften a query. When *a* is not used in the *wh*-questions, it suggests the kindness and patience part of the speaker. *Ma* is used exclusively as "*question marker"*. By using *ma,* speaker may bring an assumption about the truth or falsity of the question to the context.

2.1.2.3 Li (2006)

Li's doctoral dissertation is about SFPs in Mandarin, Cantonese and Wenzhou Chinese. She picks out *ne, ba, ma*[8] and *a* for a closer scrutiny. The full picture (Li 2006:64) for the articulated structure of the Mandarin CP domain is proposed as follows,

Discourse > Degree > Force > Evaluative > Mood>Finiteness

A   Ba, Ma   Ne

Her study differs from Rizzi's original proposal in the following three aspects. First, she adds two more layers above the ForceP, which are DiscourseP and DegreeP. The highest DiscourseP is headed by SFP-*a* and the lower DegreeP is headed

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[8] Note here that Li's dissertation agrues for the existence of only one SFP-*ma* in Mandarin Chinese, that is to say, yes-no interrogative SFP-*ma* (嗎) and modal SFP-*ma* (嘛) should be treated as the same particle.

by SFP-*ba* and SFP-*ma, ba* marks a low degree of speaker's commitment to the assertion, whereas *ma* refers to a high degree. Second, it is necessary to split the original ForceP into ForceP and MoodP. Force layer represents a more abstract concept, whereas Mood layer convey more specific information. Mandarin Chinese has at least two types of Force, i.e., assertive and directive, and five distinct sentence moods, i.e., declarative, yes/no question, wh-question, A-not-A question and imperatives, and neither Force nor Mood is overtly marked in Mandarin Chinese. Third, she adopts Cinque (1999) proposal for the structure of functional category in IP domain, Mood $_{speech}$ $_{act}$ >Mood $_{evaluative.}$ She treats *ne* as head of EvaluativeP and is situated between ForceP and MoodP.

2.1.3 General inadequacy of previous research

Since Chinese SFPs are essentially colloquial, occurring typically in spontaneous conversation, and they do not denote any truth-conditional meanings, but are mainly used to convey emotive nuances within particular contexts. Therefore, as Li and Thompson (1981: 238) put it "*linguists have considerable difficulty in arriving at a general characterization on each of them.*" We agree that the meaning and usages of SFPs are

difficult to pin down.

Previous works have laid down highly valuable groundwork, but they only inversitge the SFPs alone, seldom do they take other constituents within the sentence into consideration. Moreover, the authors only explain the few exmaples they listed on the papers, seldom do the corpora data are involved. Therefore, our research aims at gaining a comprehensive picture of the actual use of SFP-*ne* and to unveil the mechanasim of interation or correlation between certain types of adverbs with SFP-*ne*.

2.2 Literature review on SpOAs

2.2.1 English SpOAs

To the best of my knowledge, this term of SpOAs was firstly put forward by Jackendoff (1972). Since then, it is widely acknowledged in the literature. A brief review of representative works is necessary and will shed light on our research on the counterpart in Chinese.

2.2.1.1 Jackendoff (1972)

Speaker-oriented adverbs, a term first proposed by

Jackendoff are usually used to express speaker's attitude or evaluation towards the propositional content. He further lists four classes of English adverbs, which are,

(2-3)　a.　Speaker-oriented adverbs

　　　　　e.g.*evidently, unfortunately*, etc.

　　　b.　Subject-oriented adverbs

　　　　　e.g. *carefully, clumsily, cleverly,* etc.

　　　c.　Manner adverbs

　　　　　e.g. *eloquently, elegantly*, etc.

　　　d.　Focus adverbs.

　　　　　e.g. *merely, only,* etc.

(Jackendoff 1972: 87-98)

He treats SpOAs as sentential adverbs, they mainly occur in subject and auxiliary positions, which is shown below,

e.g. *Evidently, Frank is avoiding us.*

It is evident to me/the speaker that Frank is avoiding us.

He further argues the general structure configuration for

SpOA: It is Adj to the speaker that S.

2.2.1.2 Bellert (1977)

Bellert (1977) in general agrees with Jackendoff's classification on English adverbs. She treats SpOAs as sentential

adverbs and argues that SpOAs constitute a heterogenous group.
She classifies adverbs into the following five major types.

(2-4) a. Evaluative adverbs

e.g. *luckily, fortunately, happily, surprisingly,* etc.

b. Modal adverbs

e.g. *probably, possibly, certainly, surely, evidently*, etc.

c. Domain adverbs

e.g. *logically, mathematically, morally, aesthetically*, etc.

d. Conjunctive adverbs

e.g. *however, nevertheless, therefore, finally,* etc.

e. Pragmatic adverbs

e.g. *frankly, sincerely, briefly, precisely,* etc.

(Bellert 1977: 342-349)

The class of SpOAs conflates at least the above-mentioned
(2-4a), (2-4b) and (2-4e). The concrete syntactic and semantic
grounds on identifying SpOAs are proposed by Bellert as well.
For instance, evaluative adverbs cannot be questioned, all
pragmatic adverbs can co-occur with participle--"*speaking*".

2.2.1.3 Nilsen (2004)

Nilsen investigates the English and Norweigan SpOAs and
treats them as positive-polarity items (PPIs). He finds downward

entailing environments (i.e. negation, question and antecendent of conditional) disallows English SpOAs such as *"possibly"*, *"probably"*, etc. His novel proposal of treating SpOAs as PPIs is in general endorsed by later work on SpOAs. (e.g. Ernst 2008, 2009).

2.2.1.4 Ernst (2002, 2008, 2009)

Ernst offers a systematic and comprehensive study on SpOAs cross linguistically. His monograph (2002) is about the different types of adjuncts or adverbials movements and his semantic interpretation, or to be more specific, the Fact-Event Object Calculus on the syntactically based minimality condition on adjunct movements.

His paper (2009) follows the direction of Nilsen (2004) and treats English SpOAs as positive polarity items (PPIs) as well. This is supported by the empirical evidence that SpOAs are forbidden to appear in negation, question, and the antecedent of conditional. He further classifies English SpOAs into the following three types.

(2-5)　a. Discourse-Oriented, e.g. *frankly, honestly, briefly*

　　　　Paraphrase: Speaker say ADV that P

　　　　b. Evaluative,　e.g. *unfortunately, amazingly.*

Paraphrase: Speaker evaluates the fact F as ADJ.

c. Epistemic, e.g. *probably, definitely, clearly.*

Paraphrase: Speaker takes P's truth as ADJ.

(Ernst 2009: 500)

The SpOAs under Ernst research are not limited only to English, other empirical data, mainly the Mandarin counterparts are investigated as well.

Ernst (2008) investigates the Mandarin SpOAs, which mainly include "*yexu* (possibly)", "*xingkui* (fortunately)" and "*xianran* (obviously)". He finds them to be disallowed in the downward entailing environment as well.

Thus far, based on previous review on SpOAs, we may conclude that it's unanimously agreed that SpOAs are fundamentally used to express speaker's attitude or evaluation towards the propositional content or his/her commitment to the truth of the proposition. Different scholars' selections for SpOAs are almost identical with minor differences.

Our research will borrow this concept and re-define a specific type of adverbs in Chinese as SpOAs.

2.2.2 Chinese SpOAs

The group of adverbs falling into our current study is termed

as "*yuqi-fuci*" and commonly translated as "modal adverbs" or "modality adverb" by the majority of the Chinese grammar books and research outputs.

For our research, we argue that neither mood nor modality is related to Chinese *yuqi*, and this term has undergone little rigorous therotical scrunity or definition.

Therefore we are going to abandon this label and re-define them as SpOAs and propose our criteria on identifying Chinese SpOAs.

2.2.2.1 Related review on mood and modality

Literature on mood and modality is notoriously massive and complicated. A comprehensive review is apparently out of the scope of this dissertation, we here concentrate on summarizing the outline of its development.

Study on mood can be traced back to Jespersen. He (1924:313) defines mood as expressing speaker's certain attitude of the mind towards the content of sentence, and it must be reflect by the form of verbs.

Following his line of analysis, later scholars (see Bybee and Fleischman 1995, Palmer 1986/2001, among others) all treat mood to be a formally grammaticalized category of verb. It is

mainly expressed inflectionally within the set of verbal paradigm.

In essence, mood is thus a syntactic or more precisely, morphosyntactic category rather than a semantic or notional category. And it is usually overtly marked by indicative or subjunctive verb forms across linguistically.

Modality, a philosophical, logical and linguistic concept that has been the object of continual discussion since Aristotle's modal syllogisms. It is a semantic catergory dealing with the possibilities and necessities, essentially, states of affairs beyond the actual. (See Hacquard 2011: 1484-1512 for a detailed reiew on modality)

Perkins (1983: 4) vividly illustrates, "*Doing research on modality is very similar to trying to move in an over-crowded room without treading on anyone's else feet.*" Previous studies on modality include Lyons 1977, Perkins 1983, Palmer 1986/2001 and many others.

Here we briefly review works conducted by Lyons (1977) and Palmer (1986/2001).

Lyons (1977: 452) defines modality as "*used by the speaker in order to express his opinion or attitude towards the proposition that the sentence express or the situation the proposition describes.*" He defines two kinds of modality,

epistemic and deontic.

Epistemic modality is related to possibility and necessity of the truth of proposition, and it is involved with knowledge and belief.

Deontic modality is related to the necessity and possibility of acts performed by morally responsible agents, therefore it is involved with permission and obligation. In short, deontic modality deals with obligation and desire, whereas epistemic modality deals with degrees of possibilily. (Whaley, 1997: 223)

Let's consider this example, if we say, "you may open the door". The epistemic reading is that "it's possible for you to open the door", whereas the deontic reading is that "I permit you to open the door".

The distionciton between epistemic and deontic modality are since then widely accepted as the fundamental basis of modalities in the semantic domain.

Palmer (1986/2001) treats "modality" as a valid cross-language grammatical category, it mainly deals with the status of proposition that describes the event. Apart from epistemic and deontic modality, he further adds dynamic modality, which is used by speakers to express mental factors that are internal to relevant individual, such as ability and

volition, whether you are able or willing to do something.

We may conclude from the previous studies that modality is more of a semanically contenful catergory, signaling the necessity or possibility of the non-actual. And it is expressed by many catergories of lexial items: advrbs, adjectives, auxiliary verbs and so on.

2.2.2.2 Chinese notion of *"Yuqi"*

Chinese term of *yuqi* is a big "hotchpotch". It assimilates and absorbs English notions of "mood", "modality" and "sentence type" while none of these concepts are correspondent to it.

Zhao and Shi (2011) present a detailed, comprehensive review on the development of Chinese notion of *yuqi*. This concept was firstly put forwarded by Ma (1889/1983) in his modern grammatical book of Chinese language, which is the very first grammar book written by a Chinese scholar. He borrowed from the English concept of "mood" to explain Chinese "*zhuzi* (helping word)". Subsequent research (c.f. Liu 1919/1990, Li 1924/1992) correlates the classification of sentence types, such as declarative, interrogative, imperative, exclamative with Chinese notion of *yuqi*

With the rise and developmet of modality study, He (1992)

integrates the concecpt of modality into the study of Chinese *yuqi*. He distinguishes three sub-types for Chinese *yuqi*, which include "*gongneng* (functional)", "*pingpan* (evaluative)" and "*qinggan* (emotional)". His research deeply influences later works (see Zhang 1998, Qi 2002, among others) on Chinese *yuqi*, they more or less all combine the concept of "modality" with Chinese *yuqi*.

In sum, we may conclude from Shi and Shao's review that Chinese *yuqi* is a mixture of mood, modality and sentence type, since intension and extension of Chinese *yuqi* are blurring, hence this term is inaccurate and only further serves as "muddy the water".

Our research do not intend to further entangle with this issue, we prefer to jump out of this cirle and re-define this type of adverbs from perspective of the discourse framework, namely, the conversational participants and their relation with the propositional content.

Since SpOAs are defined by nature to refer to speaker's evaluation or attitude towards the proposition. It is more reasonable for us to substitute SpOAs with *yuqi* and put forward our criteria on identifying Chinese SpOAs in the following discussion.

2.2.2.3 Proposed criteria for Chinese SpOAs

Among all the previous studies on Chinese adverbs, Zhang (2000, 2004) insightful study stands out for his accurate observation and deep understanding on Chinese adverbs.

He tries to get rid of the long-held label of *yuqi* and re-defines this type of adverb as "evaluative adverb", [9]which are mainly used to express speaker's attitude or evaluation towards the proposition. Despite the surface ordering of their positions, these adverbs are, on the semantic ground, higher than proposition following it and therefore they are labeled as "higher-predicates".

Incorporating previous works (mainly Zhang 2000, 2004 and Shi 2003) on the criteria of identifying this type of adverbs into our current research, our criteria are proposed mainly from the perspective of syntacitic distribution and semantic contribution.

2.2.2.3.1 Syntactic position

In general, SpOAs are rather flexible at their surface positions. Most of the disyllable adverbs can occur at the initial position, middle position (i.e. situated between the subject and

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[9] Zhang (2000:24-46) distinguishes three types of Chinese adverbs, i.e., descpritve adverbs (描摹性副詞), evaluative adverbs (評註性副詞) and restrictive adverbs (限制性副詞).

main verb) and the final position. The final position is intonationally marked with pause, which is often marked with a comma in written Chinese.

(2-6)　a.其實，他是香港人。
　　　　Qishi　ta　　shi　　xianggang　　ren
　　　　Qishi　3SG　　BE　　HongKong　　person
　　　　Actually, he comes from Hong Kong.

　　　　b.他其實是香港人。
　　　　 Ta　qishi　shi　　xianggang　　ren
　　　　 3SG　*qishi*　BE　　HongKong　　person
　　　　 He actually comes from Hong Kong.

　　　　c.他是香港人，其實。
　　　　 Ta　shi　　xianggang　　ren　　　　qishi
　　　　 3SG　BE　　HongKong　　person　　*qishi*
　　　　 He comes from Hong Kong, actually.

Normally, initial and auxiliary positions (between subject and main verb) are canonical position, final position is treated as dislocation in colloquial Chinese. Shi (2003:20) notices this phenomenon as well and points out disyllable adverbs such as "*dagai* (probably)", " *fanzheng* (anyway)", "*kongpa* (afraid of)", "*xinghao* (fortunately)" and only a limited number of other

adverbs can appear at the final position. [10]

In addition, when SpOAs co-occur with other type of adverbs, such as manner, temporal or degree adverbs, they usually precede them. The grammatical and ungrammatical distinction below illustrates this point.

(2-7)   a.他顯然已經把所有文章完整仔細地看了一遍。

Ta   xianran   yijing ba   suoyou   wenzhang
3SG   *xianran*   already BA   all   articles

wanzheng   zixi   de   kan   le   yi bian
completely   carefully   DE   look   ASP   one CL.
Obviously, he has already read through all the articles carefully.

*b.他已經把所有文章完整仔細地顯然看了一遍。

Ta   yijing ba   suoyou   wenzhang
3SG   already BA   all   articles
wanzheng   zixi   de   xianran   kan   le
completely   carefully   DE   *xianran*   look   ASP
yi   bian.
one   CL.

The linear ordering further demonstrates that manner/ temporal / degree adverbs interacts with internal verb phrase, it is related to the event of "read this article", whereas SpOAs scopes

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[10] Cinque (1998: 14-5) notices that the higher sentence AdvPs (SpOAs in our term) in Italian cannot occur in the final (postcomplement) space unless they are "de-accented". According to our intuition and the native speakers we consulted, these SpOAs in the final position are pronounced as de-accented. A phonetical experiment may be needed here to test our intuitions.

over the whole proposition, they represent speaker's attitude or evaluation towards the whole proposition.

In the literature, syntactic theories (e.g. Travis 1988) demonstrate that SpOAs are "licensed" by the head of IP or CP, whereas manner adverbs are "licensed" by the head of VP. Moreover, a syntactic-semantic interface account is advocated by Ernst (2002). He argues that VP adverbs are semantically used to modify the adjoined VP, while SpOAs are ajoined to TP or CP for the reason that they select a propositional syntactic object.

To summarize this section, we may conclude the contrast as the "predicational adverbs" versus the "propositional adverbs."

2.2.3.1.2 Semantic contribution

Truth-conditional value

SpoAs are mainly used to express the speakers' attitude or evaluation towards the proposition. Therefore, they do not affect the truth condition of propositions.

(2-8)　a.他根本沒去過英國。

　　　ta　　genben　　mei　　qu guo　　yingguo
　　　3SG *genben*　　NEG　　go ASP　　Britain
　　He has not been to Britain at all

　　b.他沒去過英國

　　　ta　　mei　　qu　　guo　　yingguo.

3SG NEG go   ASP   Britain.

He has not been to Britain.

Sentneces in (2-8a) and (2-8b) are truth-conditional equivalent. Difference mainly lies in the speaker's attitude towards the propositional content. [11]

The sentence in (2-8b) indicates a basic illustration of the fact that "he has not been to Britain", whereas (2-8a) expresses speaker's strong attitude towards this fact. The addition of the SpOA-*genben* does not alter the truth condition of the sentence, but is mainly used to express speaker's attitude.

(2-9) a.他居然會說廣東話.

  ta   juran hui   shuo guangdong   hua
  3SG   *juran* can   speak Canton   utterance
  Surprisingly, he can speak Cantonese.

  b.他會說廣東話。

  ta   hui   shuo guangdong   hua
  3SG   can   speak Canton   utterance
  He can speak Cantonese.

Sentences in (2-9) do not different in propositional content as well, both of them have the same truth-conditions. The addition

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[11] As for the semantic and pragmatic properties of *genben* (completely), see Yao & Shi (2015) for a detailed discussion.

of SpOA-*juran* signals a degree of speaker's surprise concerning the truth of the proposition that "he can speak Cantonese".

Higher-predicate

Lü (1986) treats *"Shi"* to be the higher-predicate and gives a double-layer analysis for the following sentence,

(2-10) 不錯，鞋匠是不是個好差事。

Bucuo, xiejiang　shi bushi　ge hao　　chaishi
Right, Cobbler　　BE NEG　CL good　　business

That's right. Being a cobbler is not a good job.

(Lü 1986:320)

First layer of the proposition is that "cobbler is not a good job". "*Shi*" here triggers the second layer via re-affirming the first layer. This sentence should be paraphrased as "It's true that being a cobbler is not a good job".

In the same spirit of Lü, Zhang (2000) treats evaluative adverbs to be higher-predicates (in a semantic sense) as well.

We endorse Lü (1986) and Zhang (2000) proposal and suggest the notion of higher predicate as one of the major characterizations of Chinese SpOAs.

Treating Chinese SpOAs as higher prediates captures their

core semantic properties and teases them apart from other types of adverbs, such as degree adverbs, manner adverbs or temporal adverbs.

(2-11) 他明明離婚了。

       Ta   mingming lihun   le

       3SG   *mingming* divorce   PERF

       Obviously, he has been divorced.

The SpOA-*mingming* (obviously) here is not used to modify the event of "divorce". Instead it needs to be interpreted clause-externally, reflecting speaker's attitude or stance towards the event of his divorce.

Positive Polarity Item

In the literature, SpOAs in English, Norwegian (Nilsen 2004), Mandarin Chinese (Ernst 2008) are all treated as positive polarity items (PPIs), which refer to their absent in the negative polarity environment, such as negation, question and the antecedent of conditional sentences. Ungrammatical sentences in (2-13) to (2-15) illustrate this point.

(2-12). *他不顯然/果然/幸虧/大概參加明天的會議。

       Ta   bu   xianran/   guoran/   xingkui,

       3SG   NEG   obviously as expected   fortunately

dagai/ canjia mingtian de huiyi
Possibly participate tomorrow DE conference

(2-13) *他顯然/果然/幸虧/大概參加明天的會議嗎？

Ta xianran/ guoran/ xingkui/ dagai
3SG obviously/ as expected/ fortunately/ possibly
canjia mingtian de huiyi ma
participate tomorrow DE conference SFP

(2-14)*如果他顯然/果然/幸虧/大概參加明天的會議，那麼我也會去。

Ruguo ta xianran/ guoran/ xingkui/
If 3SG obviously as expected/ fortunately/
Dagai/ canjia mingtian de huiyi,
Possibly participate tomorrow DE conference
Name wo ye hui qu.
Then 1SG also can go

The sentences above suggest that SpOAs are barred from negative environment. On the contrary, if SpOAs are situated preceding the negation, as shown in (2-16), then it felicitous for them to appear. And in this case, the negation only scopes over the following event of "particiapate the conference". It is still impossible for SpOAs to be negated.

(2-15) 他顯然/果然/幸虧/大概不參加明天的會議。

Ta xianran/ guoran/ xingkui,
3SG obviously, as expected fortunately
dagai/ bu canjia mingtian de huiyi.

Possibly/NEG participate tomorrow DE   conference
Obviously/As expected/Fortunately/Possibly, he is not
going to attend the conference tomorrow.

Ernst (2008) argues that the block of SpOAs in negative polarity environment is due to semantic incompability. The SpOAs represent speaker's strong commitment to the truth of the proposition in his/her belief model. The lexical requirement of SpOAs is imcompatible with the negative polarity environment. He also admits there exists a continuum ranging from strong SpOAs to weak SpOAs. The Strong SpOAs are disallowed in all negative environments, whereas weak SpOAs may appear in the question or antecedent of conditionals.

Its would take us too far afield to discover the mechanism for the blockage of SpOAs on negative polarity environment, we notice that Chinese SpOAs reflect speaker's strong commitment to the truth of the proposition and indicate speaker's attitude or judgment towards the proposition, then its unlikely or impossible for the speaker to question or negate his/her own attitude.

To conclude, we propose the criteria on identifying Chinese SpOAs at both the syntactic and semantic level. Syntactically speaking, they are flexible on their surface positions, be it the beginning, middle and final position of the sentence. And they often precede other types of adverbs when co-occurring.

The syntactic flexibility of SpOAs matches with the fact that all SpOAs take semantic scope over the propostion, they are the higher predicate, which stand in a relation to or comb with the overall proposition and represent the speaker's attitude or commitment towards the truth of the proposition. Moreover, they often cannot be negated or questioned.

Proposing the criteria that is able to delimit all the SpOAs with other types of adverbs would require a lengthy discussion. It is acknowledged that the members belong to the Chiense SpOAs form a heterogenous group, like the frequently cited category of "*bird*", "robin" are considered to be "better example" of this category than "ostrich" or "penguin".

Therefore our proposed criteria may not be equally weighted, and high performance in one criterion might make up low performance in another.

2.3 Co-occur distributional pattern

2.3.1 Split-CP hypothesis

Traditionally, Zhu (1982: 207) identifies three-layer classfication on Chinese SFPs, which is summarized in the table below,

Table 1 Three-layer classification on Chinese SFPs

C_1 (Tense &Aspect)	C_2 (Force)	C_3 (Attitude)
Le Currently relevant	*Ma* Interrogative	*A* Astonishment
Laizhe Recent past	*Ba* Imperative	*Ou* Impatience
Ne$_1$ Continued state	*Ne$_2$* Interrogative	*Ne$_3$* Exaggeration

The innermost layer of C_1 indicates the tense and aspectual information of a sentence, which include SFP-*le, laizhe* and *ne$_1$*. Above this layer is the Force C_2, suggesting sentence type informamation and it is marked by SFP-*ma, ba* and *ne$_2$*. The outmost layer is the C3, expressing speaker's attitude towards the propostion, including SFP-*a, ou,* and *ne$_3$*.

The three senses of SFP-*ne*, i.e. tense/aspect information, interrogative force and attitude marker are exemplified in (2-16) respectively.

(2-16) a.他在看電視呢。

    Ta   zai   kan   dianshi   ne
    3SG   PROG look   television *ne*
    He is watching television.

    b.你的皮大襖呢？[12]

---

[12] The issue of whether SFP-*Ne$_2$* should be treated as an interrogative particle is still debatable. This example here is excerpted from Lu (1983:333), he treats the SFP-*Ne* in "non-interrogative W+*Ne*" construction as question particle.

ni   de   pi-da-ao   ne
2SG   DE   leather-big-coat   *ne*
Where is your coat?

c.他吃了 10 碗米飯呢。
Ta   chi le   shi   wan   mi   fan   ne
3SG   eat ASP   10   CL   rice   meal   *ne*
He has ten bowls of rice.

Besides this, SFPs clusters exhibit rigidly fixed ordering, compare the following well-formed and ill-formed sequences,

(2-17)   a.他在家呢吧。
            Ta   zai   jia   ne ba
            3SG   PROG   home   *ne ba*
            I guess, he is at home.

            *b.他在家吧呢。
            Ta   zai   jia   *ba ne*
            3SG   PROG   home   *ba ne* .

Zhu (1982) accurately observes the hierarchical structure of Chinese SFPs, which to some extent can be treated as a rudimental framework guided under the "split" spirit.

Rizzi (1997 and subsequent works) discovers the "richness" of the left periphery and challenges the unique Complementizer position. He suggests that Complementizer Phrase (CP) is acturally consisted of a structural zone where different functional

projections are situated based on his investigation on the Italian and other Romance language.

The highest projection is "ForceP", encoding "clausal typing" information, which distinguishes various clause type, such as declarative, interrogative, imperative etc. "FinitenessP" occupies the lowest, distinguishing between finite and non-finite clauses. "Sandwiched" between are "TopicP" and "FocusP". This can be schematized as follows,

[Force [Topic* [Focus [Topic * [Fineteness]]]]]

The expansion of CP from a single projection into an articulated structure has since then been supported by cross-linguistic empirical evidences. For instance, Hill (2002) research on Romanian; Frey (2004) on German; Haegeman (2004) on West Flemish; and Paoli (2007) investigation on a number of Romance varieties and many other similar reseach.

As we are going to review in the following section 2.1.2, Li (2006) proposes her articulated C-domain structure for SFPs in Mandarin, Cantonese and Wenzhou Chinese.

In sum, from traditional Zhu's three layers of classification on SFPs to recent development under "Split- CP" hypothesis, one issue in common is that they all recognize the hierarchical structure of SFPs, their relative order is rigidly fixed. The

outmost layer of SFPs indicates speaker's attitude and evaluation.

Review on English SpOAs and our identification of Chinese SpOAs indicates that this type of adverbs is used to express speaker's attitude or evaluation towards the proposition as well.

Moreover, the recent generative syntactic study on SpOAs (Shu, 2011) suggests that this type of adverbs occupy the head of CP. Shu (2011: 69) also admits the literurature of treating SFPs as head of CP, he leaves this issue open whether there exists some syntactic dependencies between sentence adverbs (SpOAs in our term) and SFPs.

Therefore we may conclude from the reviewed works and the observed data that SFPs are deeply interwined with SpOAs.

In the literature, only Qi (2008) and Shi (2011) mention this phenomenon of co-occurrence between SpOAs and SFPs, in-depth analysis on their interaction is blank.

Therefore it's worthwhile for us to investigate the interaction between outmost layer of SFPs and SpOAs, with the hope of discovering the semantic or pragmatic constraints on their interation and ultimately pin down the core properties of SFP-*ne.*

2.3.2 Basic assumption

Our assumptions for the current research is listed below,

(i)   The outmost layer/C_3 of SFPs will co-occur with SpOAs, their distributional pattern is not random, certain SFPs are in high frequency of co-occurrence with SpOAs.

(ii)   The core semantic features and pragmatic functions of SFPs are in accordance with certain SpOAs.

(iii)   Characteristics summarized from (ii) will explain the non-occurrence between certain SFPs and SpOAs as well.

2.3.3 Overall distributional pattern

Previous studies on SFPs are mainly based on isolated examples constructed from scholars' native-speaker intuitions, leading their data neither objective nor comprehensive.

Our research prefers to collect data from large corpus where all the authentic data originated from daily communication or widely acknowledged written works. The linguistic evidence would be mainly extracted from CCL corpus data and supplemented by BCC corpus.

The CCL corpus is developed by the Center for Chinese Linguistics at Peking University. It contains almost 307 million simplified Chinese characters publishing after 1919, diverse text genres ranging from literary works, newspapers, to talk shows and crosstalks. The BCC corpus is developed by Institute of big

data and language education at Beijing Language and Culture University. It contains around 15 billion Chinese characters, text genres include newspaper, literature works, *weibo* (Chinese twitter), scientific report and others.

We basically follow Zhu's three layer of classification on Chinese SFPs. Apart from the SFP-*a* and SFP-*ne₃* listed in his table, we find that SFP-*ba,* SFP-*ma and* SFP-*bei* are used to signal speaker's attitude or evaluation towards propositional content as well. They all occupy the outmost position of the complementizer phrase layer. Typical examples with each of them are listed below in (2-18).

(2-18) a.三亞的冬天三十多度呢。

    Sanya   de   dongtian sanshi duo du   ne
    Sanya   DE   winter   30   more degree *ne*
    The winter degree in Sanya is over 30 degree centigrade.

    b.你去過北京吧。
    Ni   qu guo Beijing   ba
    2SG   go ASP Beijing   *ba*
    I guess you have been to Beijing.

    c.今天真冷啊！
    Jintian   zhen leng   a
    Today   really cold   *a*
    It is so cold today!

d.他不喝白酒嘛，你知道的。

Ta	bu	he	bai	jiu	ma	ni
3SG	NEG	drink	white	wine	*ma*	2SG

zhidao   de

Know   *de*

He does not drink white liquor! You know it.

e.你去就去唄，不用問我。

Ni	qu jiu	qu bei	bu	yong	wen	wo
2SG	go then	go bei	NEG	use	ask	1SG

If you wanna go, just do it. No need to ask me.

With repsect to the selection of SpOAs, previous works (e.g Zhang 2002, Shi 2003, Xu 2008 among others) in general label them either as modal adverb or modality adverb and further classify SpOAs from the dichotomy of deontic and epistemic modality; see (Qi, 2006) for a comprehensive list.

Although we do not agree with their criteria on the classification, their investigations still provide with us the "pool" of SpOAs from which we will choose the commonly used disyllable and multi-syllable SpOAs.

Since our study differs from previosu research on SFPs, which solely depends on the few examples liseted on the paper. We investigate the co-occurrence between SpOAs and the above-mentioned SFPs from the CCL corpus.

This methogy is in line with the present advocation that a language user's linguistic knowledge can only be properly modeled by incorporating usage data. (Bybee 2010)

The overall distributional pattern of their co-occurrence is displayed in table 2 below.

Table 2 Co-occurrence patterns between SFPs and SpOAs in CCL

Speaker-Oriented Adverbs		Sentence Final Particles									
		Ne		*Ba*		*A*		*Ma*		*Bei*	
		Num	%	Num	%	Num	%	Num	%	Num	%
1	*queshi*	2	0.01	62	1.99	74	14.9	27	6.01	#[13]	#
2	*genben*	4	0.03	7	0.02	46	9.27	72	16.3	#	#
3	*jiujing*	#	#	4	0.01	56	11.2	#	#	#	#
4	*guaibu de*	**74**	0.68	#	#	3	0.62	#	#	#	#
5	*benlai*	3	0.02	#	#	30	6.04	251	55.9	#	#
6	*yiding*	6	0.05	397	12.7	147	29.6	4	0.08	4	21
7	*dagai*	15	1.34	1383	44.5	#	#	#	#	2	4.1
8	*qishi*	**538**	49.6	10	0.03	59	11.8	8	1.78	#	#
9	*fan zheng*	10	0.09	42	1.35	11	2.21	25	5.56	10	20
10	*ming*	#	#	#	#	18	3.62	50	11.1	#	#

---

[13] The symbol of # here refers to the absence of relevant data in CCL

#											
	ming										
11	*yexu*	35	3.21	1110	35.7	3	0.62	#	#	#	#
12	*hao xiang*	5	0.04	89	2.86	5	1.08	7	1.55	#	#
13	*juran*	8	0.07	#	#	5	1.08	#	#	#	#
14	*xingkui*	2	0.01	#	#	4	0.08	#	#	#	#
15	*shenzhi*	**377**	34.8	#	#	10	2.01	#	#	#	#
16	*Pian pian*	#	#	#	#	2	0.04	#	#	#	#
17	*zheng hao*	4	0.03	#	#	3	0.06	5	1.11	2	11
18	*guoran*	#	#	#	#	20	0.43	#	#	#	#
	Total	1083		3104		496		449		18	

The corpus data from the table prove that the interaction between SFPs and SpOAs is not random. The top three SpOAs that are in high frequencies of co-occuring with SFP-*ne* include "*qishi* (actually)", "*shenzhi* (even)" and "*guaibude* (no wonder)"; SFP-*ba* is found to be in high frequency of co-occuring with "*yexu* (maybe)", "*dagai* (probably)" and "*yiding* (must)"; SFP-*a* is found to be with "*yiding* (must)", "*queshi* (indeed)" and "*qishi*

(actually)"; SFP-*ma* is found to be with "*benlai* (originally)", "*genben* (fundamentally) and "*mingming* (obviously)". As for the SFP-*bei*, we find it rarely co-occurs with SpOAs, altogether only 19 examples are attested from corpus data.

A thorough investigation into all the interaction between SFPs and SpOAs is a formidable task and beyond the scope of a dissertation, we here only focus the study on SFP-*ne*.

The literature review in the next chapter will prove SFP-*ne* to be a controversial particle whose core meanings and functions are still under debate. Since the top three SpOAs that are in high-frequency of co-occurrence with SFP-*ne* are *qishi, shenzhi* and *guaibude*, our research focuses on their interaction. And all the SFP-*ne* in the following discussion, if not specified, all refer to ne_3.

2.4 Summary

This chapter starts with a review on Chinese SFPs, the consensus on the semantic and pragmatic properties of SFPs has still not been reached even after decades of investigation. A review on English SpOAs and the notion of Chinese "*yuqi*" proves that the long held label of "*yuqi*" is neither logical nor accurate. Our research will abandon this label and re-define them

as Chinese SpOAs.

The well-established theoretical frameworks made by Zhu's classification and Rizzi's Split-CP hypothesis provides us with the syntactic foundation at analyzing their interaction. Moreover, corpus data further demonstrate that co-occurrence between SFPs and SpOAs is not random, we will focus our research on the interaction between SFP-*ne* and *shenzhi, guaibude, qishi* in the remainder of this thesis.

Chapter 3 Preliminary Observation on SFP-*Ne*

3. 1 General review on SFP-*ne*

SFP--*ne* has long been the subject of linguistic investigation in Mandarin Chinese (e.g. Chao 1968, Zhu 1982, Cheng 1991, Shao 1989, Chu 2006, Constant 2014, among others).

Previous research on SFP-*ne* follows two major directions, one group of researchers focuses on the diachronic lexical change of *ne.* (e.g. Jiang 1986, Wang 1989, Qi 2002 among others) This is irrelevant to the current discussion, and hence we are not going to review it in more detail.

The other group of researchers analyzes SFP-*ne* on the basis of synchronic evidences, concentrating on the following three major issues,

(i) The status of SFP-*ne*, whether it's a *wh*-question particle or not.

(ii) The syntactic position of SFP-*ne* under the CP domain.

(iii) The semantic and pragmatic properties of SFP-*ne*.

As for (i), scholars (e.g. Lü 1982, Zhu 1982, Cheng 1991, Aoun & Li 1993) treat SFP-*ne* to be *wh*-question marker. Cheng (1991) even claims SFP-*ne* to be a typing particle for

wh-question under her "clause typing hypothesis". Controversy arises when another group of scholars (e.g. Hu 1986, King 1986, Shao 1989, Jin 1996, Wu 2005, Fang 2014 among others) claims that SFP-*ne* is by no means to be a question marker, it is mainly used to indicate conversational participants' interaction. They emphasize the interactional function signaled by SFP-*ne* and suggest the core characterization of SFP-*ne* to be reminding or informing. To be more specific, the speaker is reminding the hearer to pay attention to the unexpected or extraordinary information in the proposition by uttering final particle *ne.*

With respect to the syntactic position of SFP-*ne*, Li (2006) presents a detailed analysis of the commonly used SFPs, i.e., SFP-*ne,* SFP-*ba,* SFP-*ma*, and SFP-*a.* She sketches out their syntactic positions under the Split-CP framework proposed by Rizzi (1997, 2001). Li (2006:64) suggests SFP-*ne* occupies the head position of EvaluativeP, which is situated above the MoodP and below ForceP.

In the literature, research on the semantic and pragmatic properties of SFP-*ne* has received considerable attention. Two main strands of thoughts can be distinguished. As Wu (2005: 48) puts it, one is the "Meaning Maximalist" and the other is the "Meaning Minimalist". Those who take the stand of the former

would enumerate all possible meaning of SFP-*ne* in the descriptive tradition, representative works include Chao (1968) and Chu (1985). While the latter (e.g. Alleton 1981, Li & Thompson 1981, King 1986, Shao 1996, Wu 2005, Constant 2014) endeavors to extract a general, unified core meaning of SFP-*ne*. We will review these two opposite directions in more detail.

3.1.1 Meaning maximalist

3.1.1.1 Chao (1968)

Chao (1968: 802-803) lists five major meanings for SFP-*ne* in declarative sentences. They are,

(3-1) a. Continued state
還沒到時候呢

Hai	mei	dao	shihou	ne
Still	NEG	reach	time	*ne*

It isn't time yet.

b. Assertion of an equaling degree.
有一百尺呢

You	yibai	chi	ne
Have	100	feet	*ne*

It's as much as 100 feet, it's quite deep.

c. Interest in additional information

他還會扯謊呢

Ta	hai	hui	che	huang	ne
3SG	still	can	pull	lie	*ne*

He can even tell lies. (I did not expect him to be that clever).

d. Mild warning

這倒很危險呢

Zhe	dao	hen	weixian		ne
This	rather	very	dangerous		*ne*

This is rather dangerous, mind you.

e. Deliberate pause.

將來的問題呢，等到將來再說

Jianglai	de	wenti	ne	deng	dao
Future	DE	problem	*ne*	wait	arrive

Jianglai	zai	shuo
Future	again	speak

As for problems of the future, we deal with it in the future.

3.1.1.2 Chu (1986)

Chu (1986, 2006, 2009) offers a series of works on Chinese SFPs, his early work (Chu 1986) on SFPs follows the descriptive tradition and even assigns six meanings to *ne,*

（3-2）　　a.　Irony/Dissatisfaction

他還不高興呢

Ta	hai	bu	gaoxing	ne

3SG   still   NEG   happy   *ne*

He is not happy.

b.   Exaggeration

他的國語流利得很呢

Ta	de	guoyu	liuli	de	hen
3SG	DE	Chinese	fluent	DE	very

He is pretty fluent in Mandarin Chinese.

c.   Further illustration with exaggeration

家裡還有個游泳池呢

Jia	li	hai	you	ge
Home inside	still	have	CL	

Youyong	chi	ne
Swimming	pool	*ne*

(His/Her) home even has a swimming pool.

d.   Temporally irrealis

我們明天才走呢

Women	mingtian	cai	zou	ne
1PL	tomorrow	until	go	*ne*

We are not going to leave until tomorrow.

e.   Continued state

說著話呢

Shuo	zhe	hua	ne
Speak	PROG	utterances	*ne*

Talking right now.

f.   Degree

有三百里呢

You   san bai   li[14]   ne
Have   three hundred *li*   *ne*
There is as much as 300-*Li* of distance

Later research conducted by Chu (2006, 2009) gives up upon early-stage descriptive approach and instead shifting to extracting a core meaning for SFP-*ne,* which will be reviewed later.

All above-mentioned analysis on SFP-*ne* follows the descriptive tradition, aiming at listing as many meanings as possible. Future criticism points out that the biggest problem with their analysis is that we are not clear whether the meaning comes from SFP-*ne* or from other parts of sentence, or may be the interaction of both.

Therefore, subsequent works on SFP-*ne* strive for extracting a unified core meaning from which all the different interpretations can be derived.

3.1.2 Meaning minimalist

3.1.2.1 Li and Thompson (1981)

Li and Thompson distinguish between declarative SFP-*ne* and interrogative SFP-*ne*. They (1981:300) claim the core

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[14] *Li* is a Chinese Length Indicator, one *Li* roughly equals to 500 meters.

meaning for declarative SFP-*ne* is "*response to expectation*", or to be more specific, SFP-*ne* has the effect of "*calling on the hearer to pay particular attention of the information conveyed by the sentence.*"

3.1.2.2 Alleton (1981) & Wu (2005)

Alleton (1981: 91-115) concludes her study of SFP-*ne* by claimming that "*using ne, the speaker is appealing to his/her listener's active participation*". Alleton focuses on the interactive function triggered by SFP-*ne*. Following her line of analysis, Wu (2005) examines 31 declarative sentences containing SFP-*ne*. Wu concludes that SFP-*ne* is an interactive particle and is maimly used as a signal to negotiate a shared common ground on the basis of which the current interaction takes place.

3.1.2.3 King (1986) & Li (2006)

King (1986: 21) treats SFP-*ne* to be "evaluative device", he also recognizes the interactive property of SFP-*ne* and further illustrates that "*information marked by ne is of particular importance to the point that speaker is trying to make his interaction with the hearer*". His work deeply influences Li (2006) study on SFP-*ne,* she follows King's conclusion and treats

SFP-*ne* for occupying the head position of EvaluativeP within her configuration of the CP domain.

3.1.2.4 Chu (2006)

Chu (2006) re-analyzes SFP-*ne* and gives up his previous descriptive approach. Two core properties for SFP-*ne* are generalized accordingly: (i) a necessity to look back for contrast. (ii) a demand to continue. From his study, we may conclude that SFP-*ne* is used to serve the function of connecting or updating the proposition to the current context.

3.1.2.5 Constant (2011, 2014)

The central concern of Constant (2014) doctoral dissertation is about contrastive topic and he convincingly argues for the contrastive topic status of SFP-*ne*. He distinguishes four senses of *ne*, including topic-marking *ne*, fragment question *ne,* question final *ne* and declarative final *ne*. He treats *ne* as a contrastive topic operator, binding a focus phrase or sentence within its scope.

As we see from the above review, preivous investigation on SFP-*ne* during the past more than thirty years, ranging from Li and Thompson (1981) to Constant (2014), all unanimously

recognize the interactive environment triggered by SFP-*ne.* Their individual account or explanation may vary, but they are all aware that SFP-*ne* is used by the speaker to inform or remind the hearer of paying particular attention to the propositional content.

To conclude, previous studies on SFP-*ne* illuminate the direction for our current research, we follow their footstep while at the same time explore deeper into some uncharted territory.

If SFP-*ne* is used to trigger conversational participants' expectation or assumption, then we may ask what kind of expectation or assumption is triggerd by SFP-*ne*? Can we find some linguistic evidence or testing mechanism to prove the existence of this interactional function marked by SFP-*ne*?

The remainder of this chapter is devoted to our preliminary observation on the semantic properties and discourse functions encoded in SFP-*ne.*

3.2 Unexpected information encoded in *Ne* sentences

First, let' consider the following minimal pair contrasts,

(3-3)　A:　　這条裙子多少錢？
　　　　A:　　Zhe　tiao　qunzi　duo　shao　qian
　　　　　　　This　CL　dress　more　less　money
　　　　　　　How much is this dress?

B:　　三萬
San wan
30000

三萬呢
San wan　　ne
30000　　*ne*

In (3-3), A is asking the price of the dress, B's first answer, when *ne* is not added at the end, appears to be just an assertion of the fact, that's to say, the price of this dress is 30000. It takes on a matter-of-fact tone.

The second reply with the addition of *ne,* judging from native-speaker's intuition, highlights or emphasizes this price of 30,000. The speaker assumes the hearer is previously unknown or unnoticed of this price, which is in contrast with what would normally be expected for a dress.

Apart from this example, let's re-consider the following famous dialogue. [15]

(3-4)　A: 他家很窮, 你不要跟他來往了

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[15] This dialogue originates from Li & Thompson (1981) analysis on SFP-*ne*. The contrast from their example is *san-tou-niu* 'three cattles' vs. *san-tou-niu-ne* 'three cattles *ne*'. Subsequent works (e.g.Tsao 2000, Wu 2005, Chu 2006, among others) all cite this example. To make it more up to date and convincing, we here replace '*san-tou-niu* (three cattles)' with '*ershi-tao-fang* (twenty houses)'.

Ta	jia	hen	qiong	ni	bu	yao
3SG	family	very	poor	2SG	NEG	want

gen	ta	laiwang	le
with	3SG	contact	PERT

His family is very poor, so you'd better not have contact with him anymore.

B: 他家有二十套房呢。

Ta	jia	you	ershi	tao	fang	ne
3SG	home	have	20	CL	house	*ne*

His family owns twenty houses.
(To your surprise)

他家有二十套房。

Ta	jia	you	ershi	tao	fang
3SG	home	have	20	CL	house

His family owns twenty houses.

In (3-4), A is persuading or forcing B to stop dating with the boy due to the poverty of his family. B responds by asserting that "his family is in fact not poor, they actually have 20 houses." According to our native-speaker intuition and other Mandarin speakers we consulted, it is agreed that the answer sentence sounds more natural with SFP-*ne* than without it.

In line with our analysis in (3-3), if SFP-*ne* is not added, the answer of "*ershi tao fang* (twenty houses)" is only a statement of fact. When SFP-*ne* is appended by the end, the B part (speaker)

is informing the A part (hearer) of this unexpected, new
information.

Morevoer, if the B part (speaker) aims at convincing the A
part (hearer) to accecpt their relation, then SFP-*ne* must be added
at the end. If the SFP-*ne* is deleted, there is a nuance that the B
part (speaker) does not care whether the A part (hearer) accepts
the uttrance or not.

To sum up, judging from the previous minimal comparison of
sentences with SFP-*ne* and the ones without SFP-*ne*, our
preliminary observation, combined with native speaker intuition,
is that SFP-*ne* has the function of introducing new unexpected
information and is often used in interactional context.

Apart from all above-menitoned comparisons, let's consider
the following scenarios,

(3-5) a. *Scenario: A promised B to buy tickets for a basketball
match earlier. Yesterday, A went to buy them, but had to queue
up for 8 hours. In the morning, A meets B and says.*

    A: 排了八個小時呢。

Pai	le	ba	ge	xiaoshi	ne
Line	ASP	8	CL	hour	*ne*

    I have queued in the line for eight hours.

In (3-5a), The information of queuing for "*ba xiao shi* (eight hours)" is clearly the unexpected, new information to the hearer. The speaker is informing the hearer of this surprising or even astonishing long time of queueing.

b. *Scenario: A mum picks up her daughter after school, upon meeting her daughter, the little girl excitedly says*

D: 媽媽，我今天考了一百分呢。
MaMa Wo   jintian kao   le   yibai fen   ne
Mum 1SG   today exam ASP   100   point *ne*
Mum, I got 100 in today's exam.

We can infer from (3-5b) that the hearer (mum) previously might never think of her daughter scoring 100 points on the test, therefore, SFP-*ne* is used by the speaker (daughter) to inform the hearer of this unexpected, new information.

We may further prove our assumption of SFP-*ne* marking the unexpected new information by investigating the co-occurrence between certain Chinese idioms and SFP-*ne*.

(3-6) a.眾所周知，地球圍著太陽轉。
Zhong-suo-zhou-zhi   diqiu wei   zhe   taiyang
As_everyone_ knows   Earth surround ASP   Sun
Zhuan
Revolve

As everyone knows, The Earth revolves around the Sun.

*眾所周知，地球圍著太陽轉呢。

Zhong-suo-zhou-zhi　　diqiu　wei　　zhe　　taiyang
As_everyone_ knows　　Earth　surround　ASP　Sun

Zhuan　　ne
Revolve　*ne*

b.正如馬克思所言，商業主義是藝術的敵人。

Zheng ru　makesi　suo　yan,　shangyezhuyi　　shi
Just　like Max　SUO[16] speak commercialsim　　BE

Yishu　de　　diren
Art　　DE　　enemy

Just as Karl Max said, commercialism is the enemy of art.

*b.正如馬克思所言，商業主義是藝術的敵人呢。

Zheng ru　makesi suo　　yan　shangyezhuyi　　shi
Just　like Max　SUO　speak　commercialism　　BE

yishu　de　　diren　ne
art　　DE　　enemy *ne*

c.俗话说，没有规矩，不成方圆。

Su　　hua　　shuo　meiyou　　guiju　bu　　cheng
General utterance speak　NEG　　rule　NEG　become

Fang　　yuan
Square　　circle

As the old saying goes, no rules, no proper practices.

*俗话说，没有规矩，不成方圆呢。

Su　　hua　　shuo　meiyou　guiju　bu　　cheng
General utterance speak　NEG　　rule　NEG　become

---

16 *Suo* is a pronominal element in Chinese that indicates the object relativization or passivization.

Fang   yuan   ne
Square   circle *ne*

Sentences in (3-6) all start with idioms such as "As everyone knows", "As Karl Max said" and "As the old saying goes". All of these expressions require information following them to be in line with common expectation or previous assumption. Hence semantic clash arises when SFP-*ne* is used to trigger unexpected, new information. Therefore, it is ungrammatical for SFP-*ne* to be added and this further proves our previous assumption.

Based on above analysis, we may suggest that SFP-*ne* is used to trigger unexpected information.

3.3 Intersubjectivity encoded in SFP-*Ne*.

The review of SFP-*ne* in section 3.1.2 suggests that previous research all touch upon the issue of the interactive context triggered by SFP-*ne*. With the rise and development of the theoretical framework on subjectivity and intersubjectivity (e.g. Lyon 1977, Nutys 2001, Traugott 1999, 2003, 2006, Verhagen 2007 among others), we posit the semantic properties of SFP-*ne* might to some extent coincide with the notion of "intersubjectivity".

3.3.1 Review on subjectivity and intersubjectivity

In the literature, subjectivity has been investigated within functional linguistics and cognitive semantics. (See Portner 2009:126-132 for a recent overview)

Represent works from functional approach include Lyon (1977), Traugott (1998, 2003, 2010). They in general treat subjectivity as speaker's attitude and perspective in describing an event or state of affairs. (This is termed as speaker's imprint in Finegan 1995:1) Langacker (1985,1990) theory on intersubjectivity is developed within cognitive semantics and he treats it as speaker's conceptualization of a situation.

Intersubjectivity may evolve from subjectity[17] and is in general considered to be the speaker/writer's commitment in terms of hearer/audience interaction. The speaker no longer just focuses on his/her alone, but taking into the hearer's attitude or belief into consideration as well. (Traugott and Dasher 2011)

Under the cognitive grammar approach, Verhagen (2005, 2007) examines the intersubjectivity encoded on negation, clausal complementation, discourse connectives in English and

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[17] The origin of intersubjectivity is still controversial and debatable. Some scholars (c.f. represented by Traugott 2010) indicate intersubjectivity evolves from subjectivity and it is the last stage in semantic change, whereas other scholars (e.g.Benveniste 1971, Kärkkäinen 2006, among others) did not treat subjectivity as prior to intersubjectivity, but rather the other way around.

Dutch.

As for the research on intersubjectivity in Chinese, most of the previous works investigate from the perspectives of pragmatics and socioliguistics. For instance, Zhang and Yao (2009), Wang and Yang (2010) investigate the intersubjectivity encoded in Chinese horrifics, kinship terms and pronouns. Few attentions have been paid on the intersubjectivity encoded in grammatical constructions. Zhang and Li (2009) is the only paper that examines the intersubjectity encoded in the construction of *lian/dou, geng-buyong-shuo* (Even X, needless to say).

Previous research mentions the interactive context triggered by SFP-*ne,* but rarely do they deal with the intersubjectivity information encoded on SFP-*ne* and more importantly, almost no concrete empirical evidence or testing mechanism has ever been mentioned during the past research on SFPs in Mandarin Chinese.
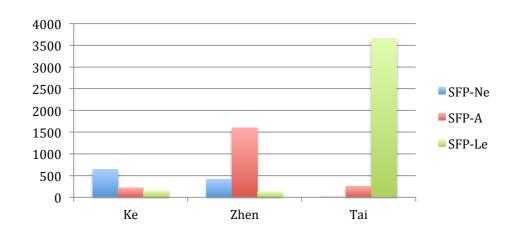
Therefore our discussion here aims at finding out the linguistic evidence to support the claim of intersubjectivity triggered by SFP-*ne.*

3.3.2 Distributional pattern

According to our large-scale corpus data investigation, we find there exists a complementary distribution between degree

modifiers and SFPs in Mandarin Chinese. The degree modifiers here include *ke* (so/such), *zhen* (really/ truly) and *tai* (excessively/very). SFPs here include SFP-*ne,* SFP-*a* and SFP-*le*. All the tokens of the co-occurrence is displayed in figure 1.

Figure 1 Frequencies of the co-occurrence between Degree Modifiers and SFPs in CCL

As clearly illustrated in the figure, co-occurrence between degree modifier *ke* and SFP-*ne* far outnumbers the rest two kinds of co-occurrence (i.e. *ke* and SFP-*a*, *ke* and SFP-*le*). With respect to degree modifier *zhen* and *tai,* the former prefers to co-occur with SFP-*a* and the latter chooses SFP-*le*. Sentences in (3-7) illustrate this contrast.

(3-7) a.香港夏天可熱呢！

　　　　xianggang　　xiatian　　ke re　　ne
　　　　Hong Kong　　summer　　*ke* hot　　*ne*
　　　　It is so hot in Hong Kong in summer.

b.香港夏天真熱啊！

 xianggang   xiatian   zhen   re   a

 Hong Kong   summer   *zhen*   hot   *a*

 It is really hot in Hong Kong in summer.

c.香港夏天太熱了！

 xianggang   xiatian   tai   re   le

 Hong Kong   summer   *tai*   hot   *le*

 It is excessively hot in Hong Kong in summer.

The three sentences above provide us with the same description of the hotness in summer in Hong Kong. Nevertheless, when this "hotness" is modified by different degree adverbs, various SFPs are attached at the end of the sentence.

In (3-7a), *Ke* here not only marks degree, it also implicitly entails the existence of a contrastive proposition, suggesting that the summer in Hong Kong acutally is not that hot. While the speakers in (3-7b) and (3-7c) just give a direct assertion of the hotness in summer in Hong Kong. Since SFP-*ne* is obligatory in the *ke* sentences, we will discuss their interaction in the following sections.

3.3.3 Characteristics of "*Ke* X *Ne*" construction

According to the corpus data[18], the general characterization

of "*Ke* X *Ne*" construction can be summarized accordingly. First,

ke need to be stressed. Second, the predicate part of "X" can be

gradable adjectives, psychological verbs and measurable verb

phrases.

(3-8) a. "價錢可貴呢！"馬威說。

jiaqian	ke	gui	ne	Ma-wei	shuo
Price	*ke*	expensive	*ne*	Ma -wei	say

"It costs a lot" said Ma Wei.

b. 我們領導對下屬的家庭問題可關心呢。

Women	lingdao	dui	xiashu	de
1 PL	leader	for	subordinate	DE

jiating	wenti	ke	guanxi	ne
family	problem	*ke*	care	*ne*

Our leader cares so much about his subordinates'
family affairs.

c. 農場今天晚上這個電影可以看一看，可開眼界呢。

Nongchang	jin	wan	zhe	ge	dianying	keyi
Farm	today	night	this	CL	movie	can

Kan	yi	kan	ke	kai	yanjie	ne
Look	one	look	*ke*	open	horizon	*ne*

You may watch this movie tonight in the farm, it quite
eye-opening.

---

[18] All the examples of the co-occurrence between *ke* and SFP-*ne*, if not specified, come from CCL corpus.

The adjective of "*gui* (expensive)" in (3-8a) belongs to the type of gradable adjective (Kennedy & McNally 2005). In (3-8b) and (3-8c), the psychological verb "*guan xin* (care for)" and VO compound "*kai yan jie* (widen one's horizon)" are both gradable or measurable, therefore it is feliticious for *ke* to mark the degree information.

With repsect to the issue of sentence type, it is declatarive and exclamative sentences that are often found to allow the co-occurrence between *ke* and SFP-*ne*. They almost never occur in imperative or interrogative sentences.

As for pragmatic properties of "*Ke* X *Ne*" construction in discourse, we find it mainly occurs in conversation, conversation is in general considered to be composed of lead sentence and answer sentence (Yin 2008, Zhao & Shi 2015).

The "*Ke* X *Ne*" construction can appear both in the lead sentence and nswer sentence.

(3-9)　請告訴小平同志，家鄉這幾年變化可大呢！
   Qing　gaosu　　xiaoqing　tongzhi　jiaxiang　zhe
   Please　tell　　　Xiaoping　comrade　hometown　this
   Ji　　nian　bianhua　　ke　　da　　ne
   Few　year　change　　　*ke*　　big　　*ne*
   Please tell Comrade Xiaoping, great changes have taken

place in his hometown these days.

(3-10) A: 莉莉，你媽今晚做的菜都沒怎麽吃。
     A: lili   ni   ma   jin   wan   zuo   de cai
        Lili   2SG   mum   today   night   do   DE dish
        Dou   mei   zenme chi
        DOU   NEG   how   eat
     B: 爸，我媽做的紅燒肉可好吃呢。
     B: Ba   wo   ma   zuo   de   hongshao
        Daddy 1SG   mum   do   DE   braised with soy
          Niurou   ke   haochi   ne
          Beef   *ke*   yummy   *ne*
     A: Lili, the dishes cooked by your mum tonight has not been touched so much.
     B: Daddy, the beef braised with soy sauce actually tastes very good.

The speaker in (3-9) asserts that great changes have taken place in the hometown. The "*Ke* X *Ne*" construction is used by the speaker to inform or remind the hearer of paying attention to these unexpected changes.

By the same token, the lead sentence in (3-10) implies that the dishes cooked by the Mum is not that tasty. The "*Ke* X *Ne*" is inserted in the answer question to incidate speaker's strong disagreement, the dishes in fact taste very good, contrary to the hearer's expectation or assumption. It also serves as a refutation to the precedent sentence.

3.3.3.1 Intersubjectivity encoded in SFP-*ne*

Based on previous observation and investigation, we summarize that *ke* is not limited to mark degree, this degree information is highly associated with speech participants' expectation or assumption and sometimes it is even related to the background world knowledge. This interactional context and intersubjectivity information need to be marked by SFP-*ne*.

(3-11)這兩條蜈蚣可不小呢！

Zhe	liang	tiao	wugong	ke	bu	xiao	ne
This	two	CL	centipede	*ke*	NEG	small	*ne*

These two centipedes are not small at all.

(3-12) 那時，我可厲害呢！英政府工作人員議論我，這個女領事真讓他們頭疼。

Na	shi	wo	ke	lihai	ne	ying
That	time	1SG	*ke*	aggressive	*ne*	Britain

zhengfu	gongzuo	renyuan	yilun	wo
Government	work	personnel	discuss	1SG

Zhe	ge	nv	lingshi	zhen	rang	tamen
This	CL	female	Consul	really	let	3PL

Tou	teng
Head	hurt

I was very aggressive at that time. British government officials always say that this Consul is a headache for them.

The speaker in (3-11) is reminding or informing the hearer

that the size and length of thses two centipedes are out of the hearer's previous expectation or assumption. In a similar vein, the speaker in (3-12) is informing the hearer that the degree of her toughness is beyond the hearer's previous expectation or assumption as well.

Zhang & Li (2009) propose that degree modifier *ke* in conversation is used to activate speaker and hearer's expectation. Their research aligns with our analysis so far and further proves that *ke* differs from other degree modifiers in signaling conversational participants' expectation and assumption.

Moreoever, the "*Ke* X *Ne*" construction, when occurring in the answer sentence of the conversation, serves the discourse function of correcting or refuting.

(3-13) A：老李，我對不起你們，本想借點白麵，可為了保密
就沒借。
　　 B：桂英，哪有，可好吃呢！
　　 A: Lao Li　wo 　　duibuqi 　nimen ben 　　　xiang
　　 A: Old Li 1SG 　　sorry 　　2 PL 　originally　want
　　 jie 　 dian 　 bai 　 mian 　 ke 　 wei 　 le 　 bao
　　 borrow little 　 white 　flour 　but 　for 　ASP 　keep
　　 mi 　 jiu 　 mei 　 jie
　　 secret 　then 　NEG 　borrow
　　 B: Gui-ying 　 na 　　 you 　　 ke haochi 　　 ne
　　 B: Gui-ying 　where 　have 　*ke* yummy 　　 *ne*
　　 A: Old Li, I feel sorry for you, I originally planned to

borrow some flour, however for the sake of keeping secret, I gave it up.

B: Gui Ying, you are wellcome, the meal you provided is very delicious.

(3-14) A：楠楠，去大連拍戲怎麼樣？講講你的明星生活。

   B：爸，拍戲可遭罪呢！

A:	Nan-nan	qu	Dalian	pai	xi	zenme	yang
A:	Nan-nan	go	Dalian	clap	drama	how	way
	Jiang	Jiang	ni	de	mingxing	shenghuo	
	Tell	tell	2SG	DE	star	life	

B:	ba	pai	xi	ke	zao	zui	ne
B:	Daddy	clap	drama	*ke*	suffer	guilty	*ne*

A: Nan-nan, how does it feel like to participate the movie shooting in Dalian? Tell me about your life of being a star?

B: Daddy, I had such a hard time there!

The lead sentence in (3-13) implicitly asserts that the meal is not tasty. The addition of "*Ke* X *Ne*" construction represents speaker's disagreement, serving the discourse function of correcting previous assertion.

Similarly, The speaker/daughter in (3-14) refutes the hearer/the dad's previous claim of an easy life for the movie star via the usage of "*Ke* X *Ne*" construction.

Sometimes the background information is not explicitly encoded in the conversation or the context, but need to be deduced from the general world knowedge or social norms.

(3-15) A:你來晚了，早點可以看見護士給這些病兒洗澡，這
可有大學問呢。

A: ni　　lai　　wan　　le　　zao　　dian　　keyi kan

A: 2SG　come　late　PERF　early　little　can see

Jian　　hushi　gei　　zhe　　xie　　bing　er

See　　nurse　give　this　CL　　sick　son

Xizao　　Zhe　ke you　da xuewen　　ne

Shower　This　*ke* have　big knowledge　*ne*

A: You are late, if you come earlier, you would see these
nurses give shower to these sick children. It is such a
knowledge-demanding work.

Unlike sentences in (3-13) or (3-14), where the contrastive
proposition or to be more specific, the proposition that is
corrected or refuted, is deduced from the conversational context.
Here the construction of "*Ke* X *Ne*" is used to refute the
background world knowledge, i.e. the general social perception
that showering for small kids is not a big deal.

The intersubjectivity encoded in the "*Ke* X *Ne*" construction
could not be more explicit if these three sentences are put
together.

(3-16) a.　你以為我這衣服便宜，可貴呢！

Ni　　yiwei　wo　　zhe　　yifu　　pianyi　　ke

2SG　think　1SG　this　cloth　cheap　　*ke*

gui　　　　　ne

expensive   *ne*

You think the cloth I'm wearing is cheap, to your surprise, its very expensive.

*b. 你以為我這衣服便宜，真貴啊！

Ni	yiwei	wo	zhe	yifu	pianyi	zhen
2SG	think	1SG	this	cloth	cheap	*zhen*

gui	a
expensive	*a*

*c. 你以為我這衣服便宜，太貴了！

Ni	yiwei	wo	zhe	yifu	pianyi	tai
2SG	think	1SG	this	cloth	cheap	*tai*

gui	le
expensive	*le*

All the sentences are initiated with "*ni-yiwei* (you think)", an explicit interactive marker, which indicate the speaker's opinion towards the hearer.

Only "*Ke* X *Ne*" in (3-16a) is grammatical furthers proves that SFP-*ne* is used to mark intersubjectivy and is related to conversational partipicant's expectation.

3.4 Summary

To sum up, this chapter starts with a literature review on SFP-*ne,* we take the basic stand of the "Meaning Minimalist" and endeavor to extract the unified core meaning of SFP-*ne.* Two

semantic features of [+unexpectedness] and [+intersubjectivity] have been summarized accordingly.

The large-scale copus data indicate that interaction between SPF-*ne* and SpOAs is not random, hence the following chapters concentrate on investigating their interaction and correction in order to further prove our preliminary observation on SFP-*ne.*

Chapter 4 Scalar Account for *Shenzhi* and *Ne*.

4.1 Introduction

Shenzhi is a commonly used adverb in contemporary Mandarin Chinese. The major dictionaries and grammatical books often define *shenzhi* as follows: *shenzhi* is used as an adverb or connective, emphasizing or highlighting constituents follow it. Relevant examples from Lü (1980/1999:486) are excerpted below,

(4-1)　a.這塊大石頭甚至四五個小夥子也搬不動。
　　　　Zhe　　kuai　　da shitou shenzhi　　si　wu ge
　　　　This　　CL　　big stone　*shenzhi*　　4　5　CL
　　　　Xiaohuozi　　Ye　ban　　bu　　　dong
　　　　youngster　　also　lift　　NEG　　move
　　　　Even four to five youngsters cannot lift this stone.

　　　　b.在城市，在郊區，甚至在偏遠的鄉村，到處流傳著這
　　　　個故事。
　　　　Zai　　chengshi　zai jiaoqu　　shenzhi　　zai pianyuan
　　　　In　　city　　　In surbub　*shenzhi*　　in　remote
　　　　De　　xiangcun　　daochu　　　liuchuan　　zhe
　　　　DE　　countryside　everywhere　spread　　ASP
　　　　Zhe　　ge　　　gushi
　　　　This　CL　　story
　　　　This story spreads from city to suburb, even to the remote
　　　　countryside.

Dictionaries or grammatical books' definition on *shenzhi* presents with us a native speaker intuition-based summary. The function of emphasis or highlight is right but too general, our research on *shenzhi* would dig out deeper to find out where the sense of emphatic comes from and most importantly, explaining its co-occurence with SFP-*ne.*

4.2 Related review on *Shenzhi*

In the literature, representative works on *shenzhi* include Shyu (2004), Yuan (2008) and Liu (2012). Liu's work focuses on diachronic semantic change and lexicalization of *shenzhi*, its irrelevant to our current research, we here only concentrate on reviewing research conducted by Shyu (2004) and Yuan (2008).

Both Shyu (2004) and Yuan (2008) conduct a comparative study between *shenzhi* and its near-synonyms. Shyu (2004) compares *shenzhi* with *lian…dou* (even) while Yuan (2008) compares *shenzhi* with *fan-er* (on the contrary). Shyu (2004) concludes that *shenzhi* is used to mark expectation-violation information. On the other hand, Yuan (2008) compares *shenzhi* with *fan-er* (on the contrary) and suggests *shenzhi* to be a focus operator, which requires elements in its focus domain to hold a sequentially additive relation. He treats *shenzhi* as a

counter-expectation marker as well, and this sense of counter-expectation derives from the focus constituents unexpectedly entering into the focus domain.

Both of Shyu and Yuan's insightful works on *shenzhi* are enlighting and thought-provoking. They accurately observe the expectation information related with *shenzhi*. We are going to further explore the semantic properties and pragmatic functions of *shenzhi* with the ultimate goal of explaining its co-occurrence with SFP-*ne*.

4.3 Distributional pattern of *Shenzhi.*

Shenzhi is generally treated as an adverb/connective or maybe the combination of so-called "connective adverb". Typical examples are displayed in (4-2) to (4-5).

(4-2) 養孩子這個責任，你要帶到 20 歲，30 歲，甚至 40 歲。

Yang   haizi   zhe   ge   zeren   ni   yao
Raise   child   this   CL   responsibility   2SG   want
Dai   dao   ershi sui sanshi sui shenzhi   40   sui
Bring   arrive 20   age 30   age *shenzhi* 40   age
The responsibility of raising children will accompany you to 20, 30 and even 40.

(4-3) 他的學歷只是初中，但是他的徒弟有本科生，研究生甚至博士。

Ta   de   xueli   zhi   shi

3SG   DE   education degree   only   BE

chu-zhong   danshi   ta   de   tudi

Junior High school   but   3SG   DE   disciple

You   benkesheng   yanjiusheng   shenzhi   boshi

Have   bachelor   master   *shenzhi*   PhD

Although he only graduated from junior high school,
among his apprentices, there are bachelors, masters and
even doctors.

(4-4) 多一個弟弟有什麼好處？他不僅沒用，甚至是個麻
煩。

Duo   yi   ge didi   you   shenme   haochu

More   one   CL bother have   what   benefit

Ta   bujin   meiyong   shenzhi   shi ge mafan

3SG   not only   useless   *shenzhi*   BE CL trouble

What's the benefit of having one more younger brother?
He is useless and even a trouble.

(4-5) 犯罪日益增長，甚至八旬老婦也遭抢劫。

Fanzui   ri   yi   zengzhang   shenzhi

Crime   day   more   increase   *shenzhi*

Baxun lao fu   ye   zao   qiangjie

Eighty old lady   also   suffer   robbery

Crime increases day by day, and even an old lady in her
eighty was robbed.

The sentences above offer a basic descriptive generalisation
on *shenzhi*. Usually, the constituents adjacent to it are
represented by a numeral phrase, noun phrase, verb phrase and
even small clause.

Aprart from these, we further analyze *shenzhi* in negation, its relation with modals and aspectual markers in order to obtain a comprehensive distribution of *shenzhi.*

(4-6) a.他家母雞甚至不下蛋。

Ta	jia	muji	shenzhi	bu	xia	dan
3SG	home	hen	*shenzhi*	NEG	down	egg

The hen in his home did not even lay eggs.

*b.他家母雞不甚至下蛋。

Ta	jia	muji	bu	shenzhi	xia	dan
3SG	home	hen	NEG	*shenzhi*	down	egg

(4-7) a.他甚至沒上過學。

Ta	shenzhi	mei	shang	guo	xue
3SG	*shenzhi*	NEG	up	ASP	school

He did not even been to school.

*b.他沒甚至上過學。

Ta	mei	shenzhi	shang	guo	xue
3SG	NEG	*shenzhi*	up	ASP	school

When *shenzhi* co-occurs with canonical Mandarin negative markers *bu* and *mei*, The surface linear ordering of *shenzhi* preceding these markers deeply reflects that *shenzhi* scopes over negation.

This further proves that *shenzhi* is a member of SpOAs,

representing speaker's attitude or evaluation towards the proposition. The imcompatility with negation is due to the reason that the speaker's commitment towards the truth of proposition in general cannot be negated.

With respect to the modals and aspectual marker, we find that *shenzhi* precede them as well, the opposite order would produce odd or ungrammatical sentences.

(4-8) a.他甚至會打冰球。

      Ta   shenzhi   hui   da   bingqiu

      3SG   *shenzhi*   can   beat   ice-hockey

      He can even play ice-hockey.

      *b.他會甚至打冰球。

      Ta   hui   shenzhi   da   bingqiu.

      3SG   can   *shenzhi*   beat   ice-hockey.

(4-9) a.他甚至去過巴黎。

      Ta   shenzhi   qu guo   bali

      3SG   *shenzhi*   go ASP   Paris

      He has even been to Paris.

   ? b.他去過甚至巴黎。

      Ta   shenzhi   qu guo   bali

      3SG   *shenzhi*   go ASP   Paris

The basic distributional pattern we obtain from all the above

sentences indicates that *shenzhi* scopes over the proposition following it. *Shenzhi* reflects speaker's attitude or evaluation towards the propositional content.

4.4 Interaction of quantitative value and informative value

To begin with, we propose that the interpretation of *shenzhi* is related to scalar information. Scale is a broad and general concept. According to Rapport & Levin (2010:8) "*a scale is a set of degrees—points or intervals indicating measurement values—on a particular dimension with an associated ordering relation.*" For instance, if we say Beijing is colder than Shanghai, we presuppose a scale of temperature dimension, and order Beijing to occupy the higher position than Shanghai with respect to coldness.

4.4.1 Explicit and implicit ordering

Constituents following *shenzhi* often generate an explicit or implicit ordering, numerals are considered to be an ordered set of quantities, sentence (4-2) is repeated here for easy reference.

(4-10)養孩子這個責任，你要帶到 20 歲，30 歲，甚至 40 歲。

Yang   haizi   zhe   ge   zeren   ni   yao

Raise   child   this   CL   responsibility   2SG   want

Dai   dao   ershi   sui   sanshi   sui   shenzhi   40   sui

Bring   arrive   20   age   30   age   *shenzhi*   40   age

The responsibility of raising children will accompany you to the time when they/you are 20, 30 or even 40.[19]

In general, age is a single unbounded dimension that stretches into the past and future infinitely, the scale of age is limited to a lower-end of 0 and the upper-end is infinite. 20, 30, 40 are all points on the scale of age. If we pick out a single-item, like 40, it is essentially impossible for us to give a judgement whether it's old or young. *Shenzhi* here firstly impose an ordering on these numerals from the speaker's perspective, and then it evokes the endpoint on the given scale.

Figure 2 *shenzhi* in numeral ranking

This schematic illustration (arrow implies time flows from left to right) in figure 2 suggests that *shenzhi* here designates 40 year-old to be the endpoint on this scale of age.

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[19] This sentence is kind of ambiguous, 40-the age point can be interpreted either to the parents who raise the kids or the kids who are being raised. However, it any case, it does not affect the fact that 40 is a point on the age scale.

Numerals are inherited to mark the explicit ordering, but in other cases the scale in *shenzhi* sentences needs to be triggerd by background world knowledge.

(4-11) 地沟油甚至流入我市某些政府的食堂。

    Digou you   shenzhi   liu   ru   wo   shi
    Trench oil   shenzhi   flow   into   1SG   city
    Mou   xie   zhengfu   de   shitang
    Some   CL   government   DE   canteen
    Illegal recycled cooking oil is even found in some government canteen in our city.

The scale in (4-11) is not derived from the current propositional content, it needs to be deduced from background knowledge, which refers to the issue of Chinese food security.

Among all the potential places where illegal recycled cooking oil would be consumed, such as school canteen, five-star hotel, street vendor. These places all represent certain points on the scale. Then "*zheng-fu-shi-tang* (government canteen)" is situated at the lowest point of likelihood to use illegal recycled cooking oil, therefore, *shenzhi* designates the boundary information as well.

As indiacted from above sentences, we propose that the semantic property of *shenzhi* is to impose a scalar ordering on an

expressed proposition, this ordering is a sequentially additive relation, *shenzhi* designates the endpoint or the boudanry information on this scale.

4.4.2 Quantitative value and informative value

Israel, M. (1996, 2001, 2008, 2011) concentrates on a group of the so-called polarity sensitivity constructions. [20] He systematically examines the semantic property and pragmatic function marked by these constructions. Canonical polarity items are displayed below.

(4-12)　　a. She was *utterly* impressed.

　　　　　b. She wasn't *the least bit* impressed.

　　　　　c. Margo did not *sleep a wink* before her big test.

(Isreal 2001: 85)

The essential idea behind his analysis on polarity items is that two semantic properties, quantitative value (q-value) and informative value (i-value) need to be distinguished.

The q-value refers to relative position (high or low) in a scalar ordering, it designates some relative or absolute position along an ordering, the particular value of a scalar norm varies

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[20] The disctinction between quantitative and informative value to some extent is inherited from the general theoretical consensus on the semantics of *even,* which include the classic insights from Horn (1979), Fauconnier (1975), Karttunen & Peters (1979), Rooth (1985, 1992) and many others. Since this is not the purpose of our work, we do not enter into details of the formal semantic treatment on *shenzhi.*

within the expectations and assumptions of speech act participants, but in general it simply reflects a default understanding of the entity under discussion.

The i-value proposed by Israel draws on a long tradition exploring the relation between scalar semantics and pragmatic inferencing and it further evolves from previous research on *let alone* (Fillmore, Kay & O'Connor 1987) and *even* (Kay 1990). They investigate the semantic properties of *let alone* and *even* under the framework of scalar model, which consists of two interrelated propositions, one is the proposition where *let alone* or *even* occurs (Text Proposition) and the other is the background information (Context Proposition) shared by the speaker and the hearer.

And hence i-value is defined as the inferential relation between expressed proposition and the implicit contrasting scalar norm. More specifically, if an expressed proposition entails the scalar norm, then it has high i-value, if its instead entailed by the scalar norm then it has a low i-value.

Along this line of analysis, scholars all take informativity or informative value as a pragmatic notion, it is in general a way of expressing interpersonal involvement between speaker and audience.

We suggest the interaction of q-value and i-value are manifested in Chinese *shenzhi* as well, as in (4-3), repeated here in (4-13).

(4-13) 他的學歷只是初中，但是他的徒弟有本科生，研究生甚至博士。

Ta	de	xueli		zhi	shi
3SG	DE	education degree		only	BE

chu-zhong		danshi	ta	de	tudi
Junior High school		but	3SG	DE	disciple

You	benkesheng	yanjiusheng	shenzhi	boshi
Have	bachelor	master	*shenzhi*	PhD

Although he only graduates from junior high school, among his apprentices, there are bachelors, masters and even Ph.Ds.

The bare noun phrase of "*boshi* (Ph.D)" adjacent to *shenzhi* is difficult to be evaluated under certain dimension. That is to say, if we randomly select one item, such as "apple", "table", unlike the inherited ordering of numerals, we cannot evaluate its position in a specific scale.

In this sentence, the background knowledge or implicit norm is that the Master usually acquires higher levels of educational titles than his apprentices.

Shenzhi firstly triggers a dimension of ordering along the

degree titles and designates Ph.D to be the endpoint of this scale. This boundary information is deduced from the relation between expressed proposition and background implicit norm. The *shenzhi* sentence usually entails the scalar norm, if Ph.D is contained in the set of his/her apprentices, then apprentices with master or undergraduate educational background are included as well.

To conclude, we endorse Isreal's claim of quantative value and informative value and propose that *shenzhi* is composed of two layers of semantic properties as well.

The first layer of *shenzhi* indicates the boundary information within a specific scale; the second layer suggests a contrast relation between the current boundary information and the background scalar norm.

4.5 Co-occurrence between *shenzhi* and *ne*

4.5.1 Distributional pattern

Recalling from the overall distributional pattern between SFPs and SpOAs in chapter 2, we find that *shenzhi* is in high frequency of co-occurring with SFP-*ne*, the data is summarized in table 3 below.

Table 3 Frequencies of co-occurrence between *shenzhi* and SFPs

SpOA	SFPs	Tokens	Percentage (%)
	Ne	377	97.4
Shenzhi	*Ba*	#	#
	A	10	2.6
	Ma	#	#
	Bei	#	#
Total		387	

All the SFPs in this table are situated at the outmost layer in the CP domain, indicating speaker's attitude or judgement towards the whole proposition. As is clearly shown from the data, co-occurrence between *shenzhi* and SFP-*ne* is predominant. We assume that certain semantic properties or pragmatic functions of *shenzhi* are compatible with SFP-*ne*. Let's start with the minimal pair contrasts below,

(4-14) a.他會說阿拉伯語。

Ta   hui   shuo   alabo   yu
3SG   can   speak   Arab   language
He can speak Arabic.

b.他甚至會說阿拉伯語呢。

Ta   shenzhi   hui   shuo   alabo   yu   ne

3SG *shenzhi* can speak Arab language *ne*

He can even speak Arabic.

c.他甚至會說阿拉伯語。

Ta   shenzhi   hui   shuo   alabo   yu

3SG   *shenzhi*   can   speak   Arab   language

He can even speak Arabic.

d.他會說阿拉伯語呢。

Ta   hui   shuo   alabo   yu   ne

3SG   can   speak   Arab   language   *ne*

He can speak Arabic. (To your surprise)

All above sentences in (4-14) illustrate a basic fact that "he is able to speak Arabic." They are all truth-conditionally equivalent. Sentence in (4-14a) offers an assertion of the basic fact, the rest of three sentences all "add emotive flavor" to this basic description. Apart from describing a basic fact, the addition of *shenzhi* and SFP-*ne* in (4-14b) will firstly trigger an ordering of languages and then designates the Arabic to be situated at the polarity-end of the scale, implying it to be the least likely language for the speaker to master.

Based on native-speaker intuition, we are all aware of the sense of "surprising" or "unexpected" hovering aroud the sentence in (4-14b). Then we could not help but asking where this sense of surprising comes from? We may naturally put

forward three assumptions,

(i)   *Shenzhi* alone, *ne* is empty.   ✗

(ii)   *Ne* alone, *shenzhi* is empty   ✗

(iii) Both *shenzhi* and *ne*.   ✔

Sentence in (4-14d) would prove that assumption (i) is wrong, if we assume SFP-*ne* is useless, it's logic to assume that sentences with *ne* alone will not express the sense of surprise. However, we do find with the addition of SFP-*ne* alone in (4-14d) reflecting speaker's puzzlement as well.

In a similar way, if we follow assumption (ii), then sentence from (4-14c) will prove that the addition of *shenzhi* alone also implies the sense of surprise. Therefore, this group of sentences prove that both *shenzhi* and SFP-*ne* contribute to the ultimate interpretation, or to be more specific, the sense of surprise or expectation contravention.

4.5.2 Affective stance marked by *ne*

Since both of *shenzhi* and SFP-*ne* contribute to the ultimate interpretation, and as we have already investigated the semantic properties and pragmatic implicatures triggered by *shenzhi.* We then focus on the meaning and function of SFP-*ne.* We start with the minimal contrast below,

(4-15) a.他的徒弟甚至有博士。

Ta   de   tudi   shenzhi   you   boshi
3SG   DE   disciple   *shenzhi*   have   Ph.D
His apprentice even has Ph.D.

b.他的徒弟甚至有博士呢。

Ta   de   tudi   shenzhi   you   boshi   ne
3SG   DE   disciple   *shenzhi*   have   Ph.D   *ne*
His apprentice even has Ph.D.

All the *shenzhi* sentences will firstly presuppose an open set. It here refers to an open proposition,

The educational title for his apprentices can be *x*

Possible values for *x* forms a set or scale

{Primary, Secondary School, Undergraduate, Master, Ph.D}

With the addition of *shenzhi,* it asserts that the actual value for *x*, the Ph.D. is the boundary point on the scale, and this conventionally implies an inferential relation between this expressed proposition and background knowledge, that a person with Ph.D. title is the least likely to be his apprentice.

This in turn gives rise to an implication of an "affective stance" on the part of the speaker. This affective stance on the part of the speaker needs to be marked by SFP-*ne.* In Michaelis & Lambrecht (1996a, 1996b) and Zanuttini & Portner (2003)

works on English exclamatives, they propose five major semantic-pragmatic properties for English exclamatives. Among all the five properties, the first three are related to our current study, they are,

a. Presupposed open proposition.

b. Scalar extent.

c. Assertion of affective stance: expectation contravention.

(Adapted from Michaelis & Lambrecht 1996:239)

The above-mentioned three steps of inference are closely related to our study on the co-occurrence between *shenzhi* and SFP-*ne*. The presupposed open proposition and scalar extent are triggered by *shenzhi*. This boundary information marked by *shenzhi* is in general deviates conversational partcipants's previous expectation or assumption, and hence the affective stance of speaker, or this sense of surprise or unexpected need to be marked by SFP-*ne*.

Expectaion contravention information usually originates from the discrepancy between background knowledge and speaker's assertion. However, it can also be derived from contextual information, particulary in conversation.

(4-16) "我也收到請帖了" 她驕傲地說，"人家甚至上門請我

呢。"

Wo	ye	shoudao	qingtie		le	ta
1SG	also	receive	invitation		PERT	3SG

jiao-ao	de	shuo	renjia	shenzhi	shang	men	qing
proud	DE	speak	3SG	*shenzhi*	up	door	invite

wo	ne
1SG	*ne*

"I got the invitation as well", she said proudly, "They even invite me at my door."

The speaker in (4-16) is informing or reminding the hearer the information that "they invite me at my door" deviates the hearer's prvious expectation or assumption. *Shenzhi* here desiganates the event of "invite me at my door" to be at the endpoint on the scale, which is the leastly likely event to be taken place. SFP-*ne* is added at the end to reinforce speaker's affective stance, and we find that SFP-*ne* is obligatory in this sentence.

4.6 Summary

To sum up, this chapter starts with the investigation on *shenzhi* and two layers of semantic values are proposed accordingly. The first layer represents the quantative value of designating the boundary information in an ordered scale, the sencond layer points out that this boundary information is related

to the the discrepancy between background assumption or expectation and current assertion.

Shenzhi involves the evaluation of an asseted proposition with repect to a presupposed scalar norm or background expectation. And this evaluation is related to expectation contravention information, which is expressed via speaker's affective stance and this emotional stance needs to be marked by SFP-*ne*.

Chapter 5 Contrastive Account for *Qishi* and *Ne*

5.1 Introduction

Qishi, a linguistic item which is frequently used in daily communication. According to traditional dictionaries and grammar books (e.g. Contemporary Chinese Dictionary, Contemporary Chinese Dictionary on Functional Words), *qishi* is illustrated as describing an actual situation.

Lü (1980/1999:737) distinguishes two senses of *qishi,* one is used to express a contrastive sense; the other indicates a corrective or additive sense. Relevant examples are excerpted below,

(5-1) a. 聽口音像北方人，其實是廣州人。

     Ting   kouyin   xiang beifang   ren   qishi shi
     Listen accent   like   Northern People *qishi* BE
     Guangzhou   ren
     Guangzhou   person
     Judging from his/her accent, he/she seems to come from
     Northern part of China, but actually he/she is from
     South.

b. 你們只知道他會說漢語，其實他的日語也很好。

Nimen	zhi	zhidao	ta	hui	shuo	hanyu	qishi
2PL	only	know	3SG	can	speak	Chinese	qishit
ta	de	riyu	ye		hen	hao	
3SG	DE	Japanese	also		very	good	

You only know that he can speak Chinese, actually his
Japanese is very good as well.

5.2 Literature review

Qishi has received scholarly attention recently and has been
the subject of several studies. Zhu (2002) treats *qishi* as a
compound word consisting of two elements, *qi* (a pronoun which
means its) and *shi* (a noun which means fruit) and *qishi l*iterally
means 'its fruit'. It has developed from an NP appearing in the
subject position from classic Chinese into a predicate adverb and
ultimately the sentence adverb expressing speaker's attitude.

Cui (2008) concentrates on synchronic semantic change of
qishi and outlines a sequential development of *qishi* from
objective contrast *qishi₁* to subjective contrast *qishi₂ a*nd then
subjective view *qishi₃* to the ultimate discourse marker *qishi ₄.*

In a similar vein, later research of Fang (2013) compares
qishi with its synonyms *shi-shi-shang* (in fact) and *shi-ji-shang*
(in reality) and she proposes all these adverbs have undergone
the semantic evolution from objective contrast to subjective

contrast. Wang, Tsai & Yang (2010) research on *qishi* in Taiwan Mandarin Chinese, they analyze the data from daily conversation recording and treat *qishi* to be a discourse marker serving the function of correcting, informing and shifting topic.

A review of previous linguistic studies on *qishi* reveals some disagreements among scholars with respect to its meanings and functions. *Qishi* has been labeled variously as discourse marker or contrastive marker. This motives us to find a way to incorporate all the meanings and functions of *qishi* and ultimately explaining its high frequency of co-occurrence with SFP-*ne.*

5.3 Distribution and interpretation

5.3.1 Overall distribution

To begin with, a total number of 47262 sentences with *qishi* are extracted from the CCL corpus. We find that *qishi* is distributed in the initial, middle and final position of the sentences, the middle position often refers to the pre-verbal, pre-auxiliary medial position or sometimes it is inserted as a parenthetical phrase.

5.3.2 General interpretation

As for the semantic properties and pragmatic functions of *qishi,* typical uses of *qishi* sentences are displayed in (5-2) to (5-5).

(5-2) 騙子好像很聰明，其實最愚蠢。
　　　Pianzi　haoxiang　hen　　congming　qishi　　zui
　　　Liar　　seem　　　very　clever　　　*qishi*　most
　　　Yuchun
　　　Stupid
　　　Liars seem to be clever, but actually they are the most stupid.

(5-3) 你只知道她會彈鋼琴，其實她也會跳芭蕾。
　　　Ni　　zhi　　zhidao　ta　　　hui　　tan　　gangqin
　　　2SG　only　know　3SG　　can　　play　piano
　　　qishi　ta　　ye　　hui　　tiao　　balei
　　　qishi　3SG　also　can　　dance　ballet
　　　You only know her as a piano player. Actually she is a ballot dancer as well.

(5-4) 說是家，其實家裡就我一個人。
　　　Shuo　shi　　jia　qishi　jiu　　li　　jiu　　wo
　　　Speak　BE　　home　*qishi*　home　inside　only　1SG
　　　Yi　　ge　　ren
　　　One　CL　　person
　　　(While you may say) I have a family, but actually I am the only person in it.

(5-5) 其實我覺得人的一生，都不平凡，都有痛苦。

Qishi	wo	jue	de	ren	de	yi	sheng
Qishi	1SG	feel	DE	person	DE	one	life

Dou	bu	pingfan	dou	you	tongku
DOU	NEG	ordinary	DOU	have	pain

Actually I think every ordinary person's life is not easy but with suffering.

In the literature, sentences above are treated as representing four senses of *qishi* respectively, they are: (i) the contrastive relation, predicates from (5-2) between *cong-ming* 'clever' and *yu-chun* 'stupid' generates a contrastive relation; (ii) the additive relation. In (5-3), *qishi* indicates that she is not only good at playing piano, but also ballot; (iii) the denial of expectation, sentence in (5-4) reflects the negation of the conventional knowledge that the number for the set of a family must exceeds one; (iv) the discourse function of shifting topic, it is encoded in (5-5), where *qishi* is situated at the beginning of the conversation to initiate the new topic.

Previous research is right in classifying different senses of *qishi,* we assume that it would be better if we could reconcile a unifying account where diverse meanings or usages of *qishi* at the surface are all derived. We start with the contrastive predicates.

5.4 Contrastive relation

5.4.1 Contrastive relation

As indicated in (5-2), we find that *qishi* is used to introduce pairs of contrastive predicates. Research on adjectives (e.g. Kennedy 2001, Kennedy & McNally 2005, among others) recognizes the distinction exists between "relative" gradable adjective and "absolute" gradable adjective and their differences mainly lies in an open/closed-scale disctinction.

"Relative" adjective refers to an open scale lacking of minimal or maximal point, such as expensive/cheap, long/short, old/young, scales for them are infinite and contextual determined.

On the other hand, "absolute" adjective is related with a closed scale, it has minimal or maximal point, such as straight, full, closed, if we say the door is closed, then its true only if the door has the maximal degree of closeness.

We find the relative/absolute adjective distinction is applicable to predicates in a subtype of *qishi* sentences as well. We borrow this term and discuss it in the following sections.

5.4.1.1 Relative predicate

The predicates for a number of sentences with *qishi* generates

a relative contrastive relation, gradable adjective such as simple/complex, good/bad are representatives of this binary lexical contrast.

(5-6)　a.現在聽起來可笑，其實當時很心酸。

Xianzai ting　qi　lai　kexiao　　　qishi　dangshi
Now　　listen　up　come　ridiculous　*qishi*　then
Hen　　xin　　suan
Very　　heart　sour
Now it sounds like ridiculous, however it actually was very heart-breaking at that time.

b.這問題看上去簡單，其實很複雜。

Zhe　　wenti　　kan　　shang　qu　jiandan　　qishi
This　　problem　look　up　　go　simple　　*qishi*
Hen　　fuza
Very　　complicated
It looks easy to solve this problem, but actually it is very complicated.

Qishi in (5-6) introduces a contrastive relation between two relative adjectives, both "*kexiao* (ridiculous)/ *xinsuan* (heartbreaking)" and "*jiandan* (simple)/ *fuza* (complicated)" represent specific points on an infinite scale and their semantic direction are opposite. And usually the first clause in these complex sentences include adverbial like "*ting-qilai* (sound like)" or "*kan-shangqu* (look like)" which points out speaker's

speculation or assessment, *qishi* in the second clause is used to express the real situation.

5.4.1.2 Absolute predicate

Apart from the relative predicates, predicates in *qishi* sentences also include absolute adjective, which are mutually exclusive. The relation between two absolute adjectives exhausts the possibilities in a given domain, they cannot be simultaneously true.

(5-7) a.客廳窗戶好像開著，其實已經關了。
Keting   chuanghu haoxiang kai   zhe
Livingroom   window   seem   open   PROG
Qishi yijing   guan   le
Qishi already   close   PERF
It seems that the windows are open in the living room, but actually they are closed.

b.這隻貓看著一動不動，好像死了，其實它還活著呢。
Zhe   zhi   mao   kan   zhe   yi   dong   bu
This   CL   cat   look   ASP   one   move   NEG
Dong   Haoxiang si   le   qishi   ta   hai
Move   Seem   dead   SFP   *qishi* 3SG   still
Huo   zhe   ne
Alive ASP   *ne*
This cat is motionless as if it were dead, but actually it's still alive.

Adjectives or predicates for all above sentences form an absolute contrastive relation, the only choice is between either p or ¬p. Predicates such like "*si* (dead) /*huo* (alive)" or "*kai* (open) / *guan* (close)" have maximal or minimal values on their specific scale, a person can either dead or alive and the window is either closed or open, the existence of a third choice is invalid.

All above-mentioned relative and absolute contrastive relations represent a majority of *qishi* sentences from corpus data. We take this contrastive relation as the starting point of analyzing *qishi* and will prove that all the other meanings or uses are actually derived from here.

5.4.2 Additive relation

Apart from the contrastive relation, another sense of the so-called additive relation is displayed below.

(5-8)   a.你只知道她會彈鋼琴，其實她也會跳芭蕾。
         Ni   zhi   zhidao ta   hui   tan   gangqin
         2SG   only   know 3SG   can   play   piano
         Qishi Ta   ye   hui   tiao   balei
         Qishi 3SG   also   can   dance   ballot
         You only know her as a piano player, actually she is a ballot dancer as well.

         b. 你以為他大學畢業，其實他還在美國念過碩士。

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Ni	yiwei	ta	daxue	biye	qishi	ta
2SG	think	3SG	college	graduate	*qishi*	3SG

hai	zai	meiguo	nian	guo	shuoshi
Still	In	America	read	ASP	master

You only know that he got a bachelor degree, and he actually got a master degree in USA.

In the literature, it is assumed that *qishi* here is used to signal an increase in the strength of an assertion that has been made in the previous utterance. In (5-8a), Her ability to play ballot is an strengthening for the previous clause that she is able to play piano, it turns out to be that she is not only good at playing piano but also ballot. In a similar vein, his graduation with a bachelor degree is demonstrated from the first part in (5-8b), *qishi* indicates that he has also obtained a master degree from USA.

We may assume that the so-called additive relation or strengthening of assertion belongs to a broad contrastive relation as well. Let's take color for example, if we admit that the colour of black and white forms a contrastive relation, then we can validly infer that yellow and amber constitutes a contrastive relation as well. This is, of course, a bit of an oversimplification, but it will suffice for present purposes.

5.4.3 Denial of expectation

Another subtype of *qishi* sentences in the literature is treated as further elaboration on specific assertion or denial of expectation. Sentences below illustrate this point.

(5-9)   a.說是家，其實家裡就我一個人。
Shuo	shi	jia	qishi	jiu	li	jiu	wo
Speak	BE	home	*qishi*	home	inside	only	1SG

Yi	ge	ren
One	CL	person

(While you may say) I have a family, but actually I am the only person in it.

b.木偶團其實就兩人，他和他的夫人。
Mu-ou	tuan	qishi	jiu	liang	ren	ta
Puppet	team	*qishi*	only	two	person	3SG

He	ta	de	furen
And	3SG	DE	wife

There are actually two persons in the puppet troupe, he and his wife.

Sentences here are associated with expectation information. In (5-9a), the traditional cultural knowledge or conventional norm for the concept of "family" usually include the husband, wife, the kid etc, therefore the general number for the set of family members must exceed one. However, *qishi* introduces a

contrastbetween the real situation of only one member in the family and the conventional perpection of family.

As for (5-9b), the expectation arises from certain entities, here it refers to "*tuan* (team)", when we say a team, it generally is consisted of many members, however, here the contrast exist between the implicature of entity "team" and the reality of he and his wife.

5.4.4. Discourse marker

When *qishi* is situated at the initial position of a sentence or utterance, particularly in the interactional conversation, it is generally treated as discourse marker, a cohesive device signaling the topic shift and indicating what follows is different from previous utterance.

(5-10) a. 主持人："你一生官司挺多，你一共打了多少？"
　　　　zhuchiren ni　　yi　　sheng guansi　　ting
　　　　Host　　　2SG　one　　life　　lawsuit　pretty
　　　　Duo　Ni　yigong　da　le　duoshao
　　　　Many 2SG altogether fight ASP how-many
　　　　李敖："其實官司常常打輸，並不總打贏。"
　　　　Li-Ao qishi guansi　changchang da　shu
　　　　Li-Ao qishi lawsuit　frequently　fight lose
　　　　Bing bu　zong　da　ying
　　　　And NEG always　fight win

Host: You have faced lots of lawsuits in your life.
How many lawsuits have you encountered?
Li-Ao: Actually I lost most of my lawsuits.

b.其實我讀書沒功利心，也不想做大學問，自娛自樂。

Qishi	wo	du	shu	mei	gongli	xin	ye
Qishi	1SG	read	book	NEG	utility	heart	also

Bu	xiang	zuo	da	xuewen	zi-yu-zi-le
NEG	want	do	big	learning	self-amusement

Actually I read not to make benefit or become a great
scholar but to be entertaining myself.

Qishi in these sentences are taken to be "discourse marker" in
the literature. However, we still think this type of *qishi* is in
essence used to signal a contrastive relation as well.

In (5-10a), it's an interview between a TV show host and Li
Ao, a famous writer and social commentator from Taiwan. The
host is asking the exact number of all the lawsuits that Li Ao has
encountered. It implies that from the host's perspective, Li Ao
wins the majority of his lawsuits. The answer sentence by Li Ao
starts with *qishi,* which indicates a refutation to the claim that is
not explicitly stated but exists at the level of implicature. The
initial *qishi h*ere suggests a contrastive relation between the
following utterances and the preceding conversational
implicature.

In (5-10b), the contrastive relation triggered by *qishi* can be interpreted as follows, the world knowledge or the social norm that the purpose of reading or studying is to obtain practical achievemetns. The speaker's assertion is that his behavior of reading and studying is only for the sake of personal interests.

5.4.5 Summary

Based on the previous analysis, we may conclude that no matter *qishi* is situated at the initial, middle or final position of the sentences or utterances, the seemingly diverse meanings and functions are linked fundamentally by its core characterization of indicating a contrastive relation.

It can be a natural contrast triggered by the lexical semantics of the predicates or an evaluative contrast triggered by the background knowledge and the current expressed proposition.

5.5 Co-occurrence between *qishi* and *ne*

5.5.1 Distributional pattern

The overall distribution pattern between *qishi* and the outmost layer of SFPs is displayed in the table below,

Table 4 Frequencies of co-occurrence between *Qishi* and SFPs

SpOA	SFPs	Tokens	Percentage
	Ne	538	87.5%
	Ba	10	1.6%
Qishi	*A*	59	9.6%
	Ma	8	1.3%
	Bei	#	#
Total		615	

Corpus data clearly prove that co-occurrence between *qishi* *a*nd SFP-*ne* is predominant, accounting for nearly ninety percent of the total number. It is summarized before that *qishi* is used to mark a contrastive relation, we may further explore the semantic and pragmatic compatibility between *qishi* and SFP-*ne* in order to explain their high frequency of co-occurrence. Let's firstly consider the following minimal contrasts.

(5-11) a.他去過法國。

    Ta   qu guo   faguo
    3SG   go ASP   France
    He has been to France.

    b.其實他去過法國呢。

    Qishi ta   qu   guo   faguo   ne
    Qishi 3SG   go   ASP   France   *ne*

Actually he has been to France. (To your surprise)

c.其實他去過法國。

Qishi	ta	qu	guo	faguo
Qishi	3SG	go	ASP	France

Actually he has been to France. (To your surprise)

d.他去過法國呢。

Ta	qu	guo	faguo	ne
3SG	go	ASP	France	*ne*

He has been to France. (To your surprise)

All these four sentences in (5-11) describe a basic fact that "he has been to France". They are all truth conditional equivalent. (5-11a) is an illustration of the basic fact, whereas the following three sentences 'add emotional flavor' to the basic fact from the speaker's viewpoint. In (5-11b), the addition of *qishi* and SFP-*ne* indicates the existence of a background assertion and then the speaker's surprise towards the fact that "he has been to France".

Then we may wonder where the sense of surprise or unexpectedness comes from? We generally predict the following assumptions.

(i) *Qishi* alone, *ne* is empty ✗

(ii) *Ne* alone, *qishi* is empty ✗

(iii)Both *qishi* and *ne* ✓

Sentence (5-11d) will prove assumption (a) to be invalid, if

we posit SFP-*ne* does not contribute to the sense of surprise, then in (5-11d), merely the addition of SFP-*ne* alone triggers the sense of surprise.

Similarly, if we assume (b) to be reasonable, then (5-11c) will prove that the addition of *qishi* also indicates the sense of contast or surprise. After excluding these two assumptions, we may suggest that it is both *qishi* and SFP-*ne* that contribute the ultimate interpretation of the whole proposition, to be specifi, both of them contribute to the sense of surprise.

5.5.2 Co-occurrence interpretation

To begin with, we pick out a typical sentence where *qishi* and *ne* co-occurs.

(5-12) 先喝一碗米湯，其實大米的精華全在此呢。

Xian	he	yi	wan	mi	tang	qishi	da
First	drink	one	CL	rice	soup	*qishi*	big

Mi	de	jinghua	quan	zai	ci	ne
Rice	DE	essence	all	in	here	*ne*

Please drink a bowl of rice soup first. Actually the essential part of rice is all in the soup.

Qishi here, as we summarized previously, suggests a contrastive relation. This contrastive relation lies in the general

background knowledge that rice soup is not nutritious and the real fact is that the essential part or the nutritious part of rice turns out to be the rice soup.

This piece of contrastive information is an unexpected or surprising information for the hearer for the viewpoint of the speaker. Therefore, SFP-*ne* is attached at the end to remind or inform the hearer of this contrastive relation.

Qishi indicates a contrastive relation and if this contrastive relation is new or unexpected to the hearer from the speaker's point of view, then SFP-*ne* will be added to reinforce this contrastive relation.

(5-13) 看著我們像個頭一樣，其實我比她矮 12 釐米呢。

Kan	zhe	women	xiang	getou	yiyang	qishi
Look	ASP	1PL	like	height	same	*qishi*
Wo	bi	ta	ai	12	limi	ne
1SG	compare	3SG	short	12	cm	*ne*

It looks like that we are in the same height, but actually I'm 12 cm shorter than her.

Here the contrastive relation is triggered by *qishi* between the height in look and in reality, the real case is that "I'm 12 centimeters shorter than her". This contrastive relation is unexpected to the hearer from the speaker's view, and hence

SFP-*ne* is added to highlight this new information. Apart from this, *qishi* and SFP-*ne* co-occur in conversational context as well.

(5-14) "曉芸，我沒告訴你，其實我有五萬多的股票呢。"

Xiao	yun	wo	mei	gaosu	ni,	qishi	wo
Little	Yun	1SG	NEG	tell	2SG,	*qishi*	1SG
You	wuwan	duo		de	gupiao		ne
Have	50000	more		DE	stock		*ne*

"Little Yun, I did not tell you this before, but actually my stocks worth more than 50000 RMB."

This dialogue originates from a TV drama between a boyfriend and his girlfriend. The boyfriend is persuading his pregnant girlfriend to keep the baby by claiming that he owns some stocks.

This evaluative contrast relation exists between speaker's current assertion of the ownership of the stocks and the background knowledge that no one is aware of the exitence of it. SFP-*ne* is used by speaker/the boyfriend to remind or inform the hearer/the girlfriend of this unexpected amount of money.

(5-15) 畫家告訴我："其實這裡所有的畫都與中國文化有係呢。"

huajia	gaosu	wo	qishi	zheli	suoyou	de
painter	tell	1SG	*qishi*	here	all	DE
hua		dou	yu	zhongguo	wenhua	you

picture   DOU   and   China   culture   have

guanxi   ne

relation   *ne*

The painter told me, "Actually, the paintings here are all related to Chinese culture."

Here, the contrastive relation needs to be construed as follows, the background knowledge that the hearer cannot understand the exhibited paintings relation with Chinese cultural and the current assertion by the painter that all the paintings are deeply related with Chinese cultural. SFP-*ne* is added by the speaker/the painter to inform or remind the hearer of this unexpected contrastive relation.

5.5.3 "*Qishi+Ne*" construction

Apart from the co-occurrence between *qishi* and SFP-*ne* mentioned above, we find *qishi* and SFP-*ne* can form a construction, eliminating the content in between.

(5-16) 我們大家，其實呢，一直都是支持你。

Women   dajia   qishi   ne yizhi   dou

1PL   everyone   *qishi*   *ne* all the time   DOU

shi   zhichi   ni

BE   Support   2SG

We actually always support you.

"*Qishi+ne*" construction usually occurs at the initial or middle position of the sentence utterance, the middle position is often occupied as a parenthetical insertion. According to CCL corpus data, we found 154 entries of "*qishi+ne*" constructions, accounting for 28% of all their co-occurrences.

We also observe that almost for all the co-occurence sentences with *qishi* and SFP-*ne*, they can be restructured as consisting of two layers, one is the "*qishi+ne*" construction, the other is the propositional content.

(5-17) a.其實年輕的姑娘不化妝更漂亮呢。

Qishi nianqing de guniang bu huazhuang
Qishi young DE girl NEG make-up
geng piaoliang ne
More beautiful *ne*
Actually young girls look more beautiful when they do not wear make-up.

b.其實呢，年輕的姑娘不化妝更漂亮。

Qishi ne niangqing de guniang bu
Qishi *ne* young DE girl NEG
huangzhuang geng piaoliang
Make-up more beautiful
Actually young girls look more beautiful when they do not wear make-up.

This further proves that *qishi* and SFP-*ne* should be treated as

higher-order speech act markers, which comments on the whole internal proposition. They are not related to the propositional content, but are mainly used to express speaker's attitude or evaluation towards the propositional content.

5.6 Summary

This chapter concentrates on the study of co-occurrence between *qishi* and SFP-*ne*. To begin with, we focus on *qishi,* which is previously treated as a polysemy linguistic item. We propose that the seemingly diverse interpretations of *qishi* are fundamentally linked by its core semantic property of triggering a contrastive relation. And if this contrastive relation is an unexpected or new information to the hearer from the speaker's view, then SFP-*ne* is appended by the end to inform or remind the hearer to pay attention to this particular information.

Chapter 6 Causality Account for *Guaibude* and *Ne*

6.1 Introduction

In general, there exists two senses of *guaibudes* in Mandarin Chinese, I label them as *guaibude $_1$* and *guaibude $_2$* respectively, for ease of exposition.

Guaibude $_1$ is used as a verb expressing reproach, that is to say, you cannot blame someone for doing something; *Guaibude $_2$* indicates speaker's awakening, his/her sudden realization of the causal relation. Canonical examples of both are excerpted from Lü (1980/1999:239)

(6-1)　a.這是我錯了，怪不得他。
　　　　Zhe　　shi　　wo　　cuo　　　le　　　guaibude　ta
　　　　This　　BE　　1SG　　mistake　PERF　*guaibude*　3SG
　　　　This is my fault, and you shouldn't blame him.

　　　　b.下雪了，怪不得這麼冷。
　　　　Xia　　xue　　le　　　guaibude　zheme leng
　　　　Fall　　snow　PERF　*guaibude*　so　　　cold
　　　　It's snowing. No wonder it's so cold.

Guaibude $_1$ is excluded from our current research, and all the

guaibude in the following study, if not specified, refer to
guaibude$_2$.

6.2 Related review

Guaibude is rarely studied in the literature, the few papers on
guaibude can be summarized as following two directions, one
group (Zhang 2009, Zhang & Li 2011) focuses on the semantic
development or grammaticalization on *guaibude*; The other
group of research, such as the most recent study (Yin 2015)
conducts a comparative research on *guaibude* and its synonym
"*nanguai* (no wonder)".

With respect to the semantic development of *guaibude* based
on diachronic evidencs, Zhang & Li (2011) outline the semantic
change of *guaibude*$_2$ evolving from *guaibude*$_1$ and this semantic
evolution is deeply influenced by pragmatic inference and
subjectivity.

Yin (2015) investigates a group of near-synonyms heading by
the morpheme-*guai* (strange), including some dialect variations
such as "*guaide* (no wonder)", "*guailai* (no wonder)". His final
conclusion is that the awakening sense of *guaibude* originates
from the sense of 'strange' manifested by the morpheme of
'*guai*'.

As we may conclude from related review, previous works on *guaibude* concentrate on the diachronic semantic development, with little attention being paid to the semantic properties and pragmatic functions on *guaibude* at the synchronic level.

Hence we are going to research on the inferential process triggered by *guaibude* with the ultimate goal of extracting its semantic properties and pragmatic functions and explaining its high frequency of co-occurring with SFP-*ne.*

6.3 *Guaibude*-type effect

6.3.1 Structural description

We exhaustively investigate the *guaibude* data from CCL corpus and find a total number of 954 sentences. [21]We find that *guaibude* can occur in both narrative and conversation. It is only attached to the effect part of the causal relation and can be used alone as the conversational reply.

(6-2)   a.她自小生活在中國，怪不得說一口流利的漢語。
Ta   zi   xiao   shenhuo   zai   zhongguo
3SG   from   little   life   in   China
guaibude   shuo   yi   kou   liuli   de
guaibude Speak one   CL   fluent   DE

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[21] A total number of 1058 sentences with *guaibude* can be found in CCL corpus. After excluding all the *guaibude*[1,] which expresses reproach, the remaining is 954 sentences.

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hanyu

Chinese

She has been living in China since childhood. No wonder she speaks fluent Chinese.

b. A："你吸煙嗎？"

A: ni　　xiyan　　ma

　　2SG　　smoke　　SFP

Do you smoke?

B："恩，吸。"

En　　xi

Yes　　smoke

Yes, I do.

A："怪不得，這麼年輕，上樓也喘氣。"

Guaibude　zheme　nianqing　shang　lou　ye

Guaibude　so　　young　　up　　stairs　also

chuanqi

Out-of-breath

A: No wonder that you, at such a young age, are out of breath when walking upstairs.

From the corpus data, we find more than 90% of *guaibude* sentences appear in causal complex sentences, if we split the cause and effect relation into the following three parts, *guaibude* unanimously scope over the part of effect, that is to say, all the causal relation trigger by *guaibude* displays the structural configuration as A+BC or BC+A.

Cause	*Guaibude*	Effect
A	B	C

6.3.2 Characterization of *guaibude*-effect.

After investigating the effect part marked by *guaibude*, a number of the characterizations of the *guaibude*-effect have been summarized accordingly. First, this effect must be a known fact, it cannot be challenged or doubted. Second, this effect cannot be enacted by a consicious determination, in short, it needs to be non-volitional. We will elaborate these points in the following discussion.

6.3.2.1 Non-occurrence of certain adverbs

In general, the most commonly used connective in Chinese causality is "*yinwen* (because)…*suoyi* (therefore)". A comparative study between the cause and effect relation marked by "*suoyi* (therefore)" and "*guaibude*" will uncover certain unique features of *guaibude*-effect.

We find that *guaibude* requires it effect part to be an old, given information, it cannot be challenged or doubted. The adverbs expressing speaker's speculation or uncertainty are blocked in all *guaibude* sentences. However, it is totally grammatical for them to appear in the cause and effect triggered by "*yinwei…suoyi* (because…so…)".

The distinction below illustrates this point.

(6-3)　a.因為堵車，所以他們可能晚到。

Yinwei　　du　　che　suoyi　tamen　keneng　　wan

Because　block　car thus　　3PL　　probably　late

Dao

Arrive

Due to the traffic jam, they may arrive late.

*怪不得他們可能晚到，原來是堵車。

Guaibude　tamen　keneng　　wan　　　dao

Guaibude　3PL　　probably　late　　　arrive

Yuanlai　shi　　du　　　che

originally　BE　　block　car

Near-synonyms such as "*dagai* (possibly)", "*yexu* (maybe)", suggest speaker's guess or speculation are all barred from the effect part triggered by *guaibude.*

6.3.2.2 Non-volitional event

Apart from the effect being an undoubted fact, the second observation concerning the effect triggered by *guaibude* is that it needs to be a non-volitional event, which in a sense refers to the effect cannot be intended by the speaker.

(6-4)　*a.怪不得我沒上課，原來是病了。

Guaibude　wo　　mei　　shang ke　　yuanlai

Guaibude 1SG   NEG   up   lesson originally

Shi   bing   le

BE   sick   PERF

b.怪不得他沒上課，原來是病了

Guaibude ta   mei   shang ke   yuanlai   shi

Guaibude 3SG   NEG   up   class originally BE

Bing   le

Sick   PERF

No wonder he/she did not attend the class. He is sick.

The event of "being sick" is a non-volitional, the speaker himself or herself cannot make a conscious determination to enact the event of being sick. Therfore, it's ungrammatical for *guaibude* to appear.

However, if this effect of "being sick" is caused by certain human-control factor, then it grammatical to use *guaibude* as long as the causal relation is an abductive inference.

(6-5) 怪不得我頭疼，原來昨晚睡覺忘關空調。

Guaibude wo   tou   teng   yuanlai   zuo

Guaibude 1SG   head   hurt   originally yesterday

Wan   shuijiao   wang   guan   kongtiao

Night   sleep   forget close air-conditioner

No wonder that I feel headache, I forgot to switch off the air-conditioner last night while sleeping.

Here the effect of "being sick/headache" is non-volitional for

the speaker, and the causality refers to a real-world abductive reasoning. Therefore, it's felicitous for *guaibude* to appear.

6.4 Semantic framework on *Guaibude*

Thus far, we have argued that *guaibude* is related to the effect part of causality, and the proposition led by *guaibude* needs to be an event that has already taken place. This can be established through both introspection and corpus search.

Since *guaibude* triggers an abductive reasoning, we will further investigate the speaker's inferential process or the semantic background on *guaibude*.

(6-6)　我恍然大悟：怪不得戰士把"我們最先把太陽迎入
祖國"這十一個大字寫在墙上，他們的位置真優越！
Wo　　huang-ran-da-wu　guaibude　zhanshi　ba
1SG　　suddenly realize　*guaibude*　soldier　　BA
women　zui　　xian　　　ba taiyang　　ying
1PL　　most　early　　　BA sun　　　welcome
ru　　　zuguo　　　zhe　shiyi　　ge　　da
into　　motherland　this　eleven　　CL　big
zi　　　xie　　zai qiang　shang　tamen　de
word　write　in　wall　　up　　　3PL　　DE
weizhi　　zhen　youyue
position　really　superior
I came to a sudden realization: No wonder the soldiers wrote the slogan as 'we are the first to embrace sunlight for our homeland' on the wall. They possess such unique

position.

The contextual information for this sentence is that the speaker as a journalist traveling to a frontier sentry located in the Northeastern part of China, he finds a slogan brushing as 'we are the first to welcome sunlight to our homeland' to be very strange. After realizing the uniqueness of their location, the easternmost edge of China, he suddenly identifies the cause and effect relation.

We observe from this example the whole inferential process triggered by *guaibude*, that is,

(i) Certain event or phenomenon has been observed by the speaker, he/she finds it to be irregular or unexpected.

(ii) Certain unknown or mismatched cause appears.

(iii) Identify and acknowledge the cause and effect relation.

(iv) Speaker no longer feels confused or puzzled.

Or to be more explicit,

(i) The surprising effect or consequence Q is observed.

(ii) And if P were true, Q would be true as well.

(iii) Hence, there is reason to believe that P is true. Causality relation between P and Q is realized.

(iv) Speaker no longer feels the actuality of Q to be

surprising.

This four-stage process is applicable to all the inferential development marked by *guaibude.* It is either the effect part or the identification of the cause and effect relation that deviates or differs from speaker's previous conventional expectation or assumption.

6.5 Co-occurrence between *guaibude* and *ne.*

6.5.1 Distributional pattern

According to the previous distributional pattern between SpOAs and SFPs, *guaibude* comes into our view as its high frequency of co-occurrence with SFP-*ne*. Similar to *qishi* and *shenzhi*, we here investigate the co-occurence between *guaibude* and all the commonly used SFPs expressing speaker's attitude or evaluation towards the propositional content.

Table 5 Frequencies of co-occurrence between *Guaibude* and SFPs

SpOA	SFPs	Tokens	Percentage
	Ne	74	82.3
Guaibude	*Ba*	5	5.5
	A	9	10.0
	Ma	2	2.2

Total	90

As suggested from the data, co-occurrence between *guaibude* and SFP-*ne* is predominant. Once again, we consider the minimal pair contrasts below,

(6-7)　a.他會說日語，因為他奶奶是日本人。

Ta　　hui shuo　riyu　　　yinwei　　ta　　　nainai
3SG　canspeak　Japanese　because　　3SG　　grandma
shi　　riben　ren
BE　　Japan　person
No wonder he can speak Japanese, his grandma is a Japanese.

　　b.怪不得他會說日語呢，原來他奶奶是日本人。

Guaibude　ta　　　hui shuo　riyu　　　ne yuanlai　　ta
Guaibude 3SG　　canspeak　Japanese　*ne* originally
Ta　　　nainai　　shi riben　ren
3SG　　grandma　　be Japan　person
No wonder he can speak Japanese, his grandma is a Japanese.

　　c.怪不得他會說日語，原來他奶奶是日本人。

Guaibude　ta　　　hui shuo　riyu　　　yuanlai　　ta
Guaibude 3SG　　canspeak　Japanese　originally 3SG
Nainai　　shi riben　ren
Grandma　BE Japan　person
No wonder he can speak Japanese, his grandma is a Japanese.

d.他會說日語呢，原來他奶奶是日本人。

Ta	hui	shuo	riyu	ne	yuanlai	ta
3SG	can	speak	Japanese	*ne*	originally	3SG

nainai	shi	riben	ren
Grandma	BE	Japan	person

No wonder he can speak Japanese, his grandma is a Japanese.

All above sentences describe a basic fact that "he can speak Japanese", and the reason for this is that his grandma is a Japanese. (6-7a) is an assertion on the basic fact, the rest three sentences all add some 'emotional flavor' to this basic fact. The speaker finds his ability to speak Japanese being surprising or unexpected, after realizing his grandma is a Japanese and identifying this causal relation, the speaker no longer feels confused.

Then we may ask where does the sense of surprise or unexpected originates from? We basically posit the following assumptions.

(i) *Guaibude* alone, *ne* is empty.   ✗

(ii) *Ne* alone, *guaibude* is empty.   ✗

(iii)Both *guaibude* and *ne.*   ✓

In the similar spirit of explaining the co-occurrence between *shenzhi, qishi* and SFP-*ne.* If we attribute the sense of surprise or

unexpected from *guaibude* alone, then (6-7d) will prove that even without *guaibude*, the addition of SFP-*ne* alone still illustrates his ability of speaking Japanese to be surprising. If we follow (ii) and treat *ne* alone to be responsible for the sense of surprise, then (6-7c) will prove that with the addition of *guaibude* alone, the speaker finds his ability of speaking Japanese to be unexpected as well. Therefore, we may propose that both *guaibude* and SFP-*ne* contribute to the sense of surprise or unexpected implied from the context.

6.5.2 Causality and subjectivity

Based on native speaker intuition, we find the addition of SFP-*ne* is applicable to all the *guaibude* sentences. The cause and effect relation triggered by *guaibude* is deeply involved with speaker's subjective evaluation and if this causal relation is manifested in the interactional context, the speaker is informing or reminding the hearer to pay attention to this causality relation, then the addition of SFP-*ne* is justified. Let's firstly investigate the effect part situated between *guaibude* and SFP-*ne*.

(6-8)　怪不得他突然暈倒呢，原來最近他一直在減肥。
　　　Guaibude　ta　　turan　　yun　　dao　　ne
　　　Guaibude　3SG　suddenly　faint　fall　　*ne*

Yuanlai   ta   yizhi   zai   jian   fei
Originally 3SG   all the time   PROG lose   fat
No wonder he fainted suddenly. He has been on a
diet recently.

(6-9)   怪不得上海人不打架呢，人家文明程度高。
Guaibude shanghai ren   bu   dajia ne renjia
Guaibude shanghai   person NEG   fight   *ne* 3PL
Wenming   chengdu   gao
Civilization   degree   high
No wonder that Shanghainese do not like to fight. They
are more civilized.

(6-10) 媽媽：寶貝，多吃胡蘿蔔對視力有好處。
Mama baobei duo   chi huluobo   dui   shili
Mum   baby   more eat carrot   for   eye-sight
You   Haochu
Have   Benefits
女兒：哦，怪不得兔子不戴眼鏡呢。
nü-er   o guaibude   tuzi   bu   dai
Daughter   oh *guaibude* rabbit NEG   wear   glass
Yanjing   ne
Glass   *ne*
Mum: Sweetie, eat more carrot. It's good for your
        eyesight.
Daughter: Oh, I see. No wonder the rabbit does not wear
        glasses.

Sentences above illustrate the effect part between *guaibude*
and SFP-*ne* ranging from individual event, stative situation to
common-sense knowledge. In (6-8) the "sudden happening of

faintness" is a random event, it denotes transitory and accidental properties; In (6-9), a stative situation in which "Shanghainese never fight" refers to the permanent and essential properties. The distinction between (6-8) and (6-9) may coincide with the famous distinction between stage-level and individual-level predicate proposed by Carlson (1977).

In (6-10), it's a common-sense knowledge, "the rabbit does not wear glasses". And the speaker (daughter) is not confused by this phenomenon, but the establishment between eating carrot and not wearing glasses is unexpected based on her previous knowledge.

Thus far, we may argue that neither the observed effect nor the cause needs to be the unexpected or surprising. From the speaker's viewpoint, the core property of causality triggered by *guaibude* and SFP-*ne* lies in the identification and establishment of this causal relation.

The reason why SFP-*ne* can be appended by the end is that speaker finds the establishment of this causality is unexpected or surprising to the hearer, thus he/she suggests the hearer to pay attention to this causal relationship.

6.5.3 "*Guaibude+Ne*" construction

We also find from the corpus data that *guaibude* and SFP-*ne* can form a construction, eliminating the effect part. Canonical examples are often used as a reply in conversation.

(6-11) 奶奶："那人是誰？那麼會說話，一直誇我年輕。"
　　　Nainai　　na ren　　shi shui　　Name　hui shuo
　　　Grandma　thatperson BE who　　That　canspeak
　　　Hua　　Yizhi　　　　kua　　wo　　　nianqing
　　　Utterance　All the time　praise　1SG　young
　　　孫女："他是上海有名的作家，我們年輕人都知道。"
　　　Sun-nv　　　　　ta　　shi shanghai　youming
　　　Granddaughter　3SG　　BE shanghai　famous　　DE
　　　Zuojia women　　nianqing　ren　　　dou　　zhidao
　　　Writer　1PL　　　young　　person　　DOU　know
　　　奶奶："哦，怪不得呢。"
　　　Nainai　　o　guaibude　ne
　　　Grandma　oh *guaibude*　*ne*
　　　Grandma: Who is that guy? He is so honey-lipped that he kept praising me of staying young.
　　　Granddaughter: He is a famous writer in Shanghai. Young people all know him.
　　　Grandma: oh, I see. No wonder (he is so honey-lipped).

In this reply, the speaker/grandma deletes the effect part and put *guaibude* and SFP-*ne* together to express her realization of this causal relationship. This construction proves again that

guaibude and SFP-*ne* occupies the periphery position in the sentence at the syntaticl level, and indicates the speaker's subjective attitude or evaluation towards the propositional content at the semantic level.

Moreover, we usually find interjection such as *oh*, *wow* to appear at the beginning of the utterance. Interjections are used to express speaker's emotional feelings (Wierzbicka 1992). The high frequency of co-occurrence between interjection and *guaibude* further proves the speaker's mental change and his/her realization of the causal relationship.

6.6 Summary

Based on the above analysis, we find that *guaibude* is used to trigger the causal relationship and the effect part adjancent to *guaibude* must be a known fact and cannot be doubted or challenged. The fundamental character in *guaibude* sentence is the identification or establishment of causality relation from the speaker's viewpoint. SFP-*ne* is used by the speaker to remind or inform the hearer of this unexpected cause and effect relation.

Chapter 7　Conclusion

To conclude, I would like to offer a summary of previous chapters. My research proposes a new methodology of studying Chinese SFPs and a case study on the interaction and correlation between SpOAs and SFP-*ne* has been pursued.

The large-scale quantative study from the corpus data prove that the top three SpOAs that are in high frequency of co-occurrence with SFP-*ne* include *shenzhi, qishi* and *guaibude.*

Our research proves that despite idiosyncratic functions displayed on the surface, these adverbs are fundamentally linked by their core characterization of "unexpectedness".

Shenzhi designates the boundary information on a given scale, and this endpoint-value is not commonly accepted; *qishi* indicates either a natural contrast or evaluative contrastive relation and this contrastive relation is unexpected; *guaibude* suggests speaker's realization of cause and effect relation, this relation is unexpected for the hearer from the speaker's point of view.

All these adverbs are often used in the interactive contexts, where SFP-*ne i*s used by the speaker to inform or remind the hearer of the unexpected information triggered by these adverbs.

7.1 Negative evidence

Negative evidence is as important as positive evidence in testing our previous hypothesis. Conclusion drawn from positive data needs to be confirmed by assessment from the corresponding negative data.

Distributional pattern in chapter 2 illustrates that some SpOAs, such as "*guoran* (as expected)", "*mingming* (obviously)", "*pianpian* (unfortunately it happened)", "*juran* (unexpectedly)", which seldom co-occur with SFP-*ne*, and this phenomenon deserves our serious consideration as well.

Guoran is used to indicate that the reality or fact conforms to speaker's previous expectation or belief, see the examples below,

(7-1) a.聽說這部電影很好，看了果然不錯。

    Tingshuo zhe   bu   dianying   hen   hao   kan
    Hear   this   CL   movie   very   good   look
    Le   guoran   bucuo
    PERF   *guoran*   right
    I heard this movie is good and it is good as I expected after I watched it.

   b.英國人懷疑食品添加劑影響兒童成長，果然不出所料，調查顯示 40％兒童產品有添加劑。
    Yingguo   ren   huaiyi   shipin   tianjiaji
    Britain   people doubt   food   addictive
    yingxiang   er-tong   chengzhang   guoran

affect	children	growth	*guoran*			

bu-chu-suo-liao	diaocha	xianshi	40%	ertong
as expected	investigation	indicate	40%	child

chanpin	you	tianjiaji
Product	have	addictive

The British doubt that food addictive affect children's growth. As expected, a survey indicates 40% of children products contain addictive.

Sentences in (7-1) prove that *guoran* is used to mark the reality or fact adjacent to it must be in line with previous expectation or speculation, and hence semantic clashes arises between "unexpectedness"triggered by SFP-*ne* and "as expected" triggered by *guoran.*

Mingming express speaker's strong affirmation towards the propositional content,

(7-2) a. 菜單上明明寫的是"魚"，可飯店非說是海鮮，收我們海鮮價。

Caidan	shang	mingming	xie	de	shi	yu
Menu	on	*mingming*	write	DE	SHI	fish

ke	fandian	fei	shuo	shi	haixian	shou
but	restraint	just	say	BE	seafood	charge

women	haixian	jia
1PL	seafood	price

The word "Fish" is clearly shown on the menu, but the restaurant says what we ordered was seafood, charging us the price of seafood.

b. 這明明是假煙，但包裝與真的一模一樣。

Zhe	mignming	shi	jia	yan	dan
This	*mingming*	BE	fake	cigarette	but

Baozhuang	yu	zhen	de	yi-mo-yi-yang
Package	and	real	DE	same

Undoubtedly, this is fake cigarette, but its package looks the same with real cigarette.

In (7-2), *mingming* indicates speaker judgment or evaluation towards the propositional content, "fish written on the menu" and "fake cigarette" is beyond any doubt, its non-negotiable. When *mingming* is used, in the most cases, the speaker almost never takes the hearer's assumption or expectation into consideration. As we summarizes in chapter 3, SFP-*ne* needs to be used in interactive context, where the speaker takes the hearer's expectation or assumption into consideration. Therefore the lack of intersubjectivity manifested in *mingming* blocks its co-occurrence with SFP-*ne.*

The semantic features summarized on SFP-*ne* so far can explain certain types of non-occurrence. However, almost no empirical data of the co-occurrence between "*pianpian* (contrary to expectation)" or "*juran* (surprisingly)" and SFPs-*ne* are extracted from the corpus, while this is exactly the type of adverbs suggesting the counter-expectation information. This

poses a real challenge to our current interpretation.

(7-3) 昨天找了你好幾次，偏偏都不在家。

Zuotian	zhao	le	ni	hao	ji	ci
Yesterday	find	ASP	2SG	good	many	CL
Pianpian	dou	bu	zai	jia		
Pianpian	DOU	NEG	at	home		

I tried to find you at your home several times yesterday,
but unfortunately you are not at home.

(7-4) 她沒想到，遙遠的東方，居然會有這麼大的一個國家。

Ta	mei	xiang	dao	yaoyuan	de	dongfang
3SG	NEG	think	arrive	distant	DE	eastern
Juran		hui	you	zheme	da	de	yi
Unexpectedly	will	have	so	big	DE	one
ge	guojia					
CL	country					

It never occurred to her that there exists such a big
country in the far East.

Pianpian in (7-3) expresses speaker's strong dissatisfaction
or surprise. And it indicates among all the possible alternatives,
the fact or reality adjacent to *pianpian* is the least desirable event
from speaker's perspective.

In (7-4), *juran* indicates the speaker's assertion is out of the
speaker's previous expectation, she does not expect the existence
of such a big country in the far East.

The best explanation we can offer currently is that the feature of unexpectedness is only investigated qualitatively throughout this dissertation. It migh be more accurate if we would conduct a quantative research on it, and we might find the existence of a continuum underlying the notion of (un) expectedness, ranging from the minimal degree of unexpectedness to the maximal degree of total confusion.

Although all these averbs introduce unexpected information, the differences lies in that the degree of unexpectedness triggered by *pianpian* and *juran* are higher than the group of *shenzhi, qishi* and *guaibude.* To be more concrete, the unexpectedness of these three adverbs are to some extent accpected by the speaker, and hence he/she is able to remind or inform the hearer of this unexpectedness information, whereas unexpected information triggered by *pianpian* and *juran* is even unaccepted to the speaker himself/herself and therefore SFP-*ne* can not be added at the end.

7.2 Other SFPs

Our research proposes a methodological innovation on investigating Chinese SFPs through analyzing their interaction and correlation with SpOAs. The present investigation on SFP-*ne*

in declaratives can be expanded to other Chinese SFPs as well.

Previous studies on the properties of SFP-*ba* almost reach a consensus that it is used to express speaker's uncertainty or doub. Recalling from the overall distributional pattern in chapter 2, we find the top three adverbs that are in high frequency of co-occurring with SFP-*ba* are "*dagai* (probably)", "*yexu* (maybe)" and "*yiding* (definitely)", which all in general express speaker's uncertainty or doubtness.

On the other hand, SpOAs such as "*mingming* (obviously)", "*xingkui* (fortunately)" never co-occur with SFP-*ba.* Following the line of analysis on SFP-*ne,* we may posit that interaction and correlation between SpOAs and SFP-*ba* is another promising area worth studying in the future.

Apart from SFP-*ne* and *ba*, the recent research conducted by Badan and Cheng (2015) deals with Mandarin exclamatives. They argue that SFP-*a* is an overt realization of speaker's point of view (2015: 403-405) and treats SFP-*a* to be an ego-evidentiality marker.

Other frequently used particles occupying the outmost layer of the hierarchy include SFP-*bei,* SFP-*ma,* and SFP-*ou.* They are rarely discussed in the literature before. Even though the meaning and uses of SFPs are difficult to pin down, research on

the high frequency of their interaction with SpOAs will offer a new perspective and shed light on the interpretation of SFPs ultimately.

7.3 Suggestions for future research

SFPs are widely found to appear in other dialects across China. Cantonese is known as a typical dialect depending on large inventory of SFPs to express speaker's various speech acts, attitude, belief and so on.

To the best of my knowledge, although Cantonese SFPs have been extensively studied in the past, particularly Hara & McCready (2015) work on the (un) expectedness encoded in Cantonese SFP-*wo* and SFP-*lo,* which to some extent is very similar to our analysis on SFP-*ne.* However, almost no research has ever been conducted with respect to their interaction with SpOAs. Therefore our methodology may apply to research on tracing meanings and functions for SFPs in Cantonese as well.

The robust pattern of interaction between SpOAs and SFPs are not restricted to Mandarin and other dialects with China, but are found in a range of typologically related or unrelated language. Therefore we have a notable cross-linguistic phenomenon to account for.

Perhaps not surprisingly, SFPs are found in other Eastern Asian language, such as Japanese (e.g. Kamio 1994, Davis 2011, among others) Korean (e.g. Strauss 2005, Kim 2015, among others).

Furthermore, SFPs are also attested in other European langauges, which include Western Flemish (Haegeman1993, 2014), German (König 1991, Zimmermann 2011) and Hungarian (Gyuris 2009).

The list is far from complete, many other languages are reported to contain large inventory of particles to express speaker's attitude or stance towards the propsotional content as well. Therefore it might be helpful in observing and analyzing their interaction with certain SpOAs as well.

Furthermore, the concept of "Mirativiy" has been mainly put forwarded by Delancy (1997, 2001), Aikhenvald (2012). They suggest that the mirative marker is used to convey unexpected, new information. Our conclusion that SFP-*ne* and other SFPs are used to mark unexpected new information may to some extent comply with the properties of this linguistic category. Whether mirativity should be treated as a separate linguistic category on the world linguistic map and to what extent is our study on SFP-*ne* coincides with mirativity is an open issue leaving for

future research.

It is hoped that our study on the interaction between Chinese SFPs and SpOAs, SFP-*ne* and SpOAs-*shenzhi, qishi, guaibude* in specific, will open up new lines of research towards a better understanding of the semantic and pragmatic nature of particles across languages around the world.

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