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**SPEAKER-ORIENTED ADVERBS AND
CROSS-PROPOSITIONAL LOGIC**

-- A CASE STUDY OF THE
MANDARIN ADVERB *PIANPIAN*

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Speaker-oriented Adverbs and
Cross-propositional Logic
-- A Case Study of the
Mandarin Adverb *Pianpian*

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A thesis submitted in partial fulfilment of the requirements for
the degree of Doctor of Philosophy

August 2017

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(Signed)

ZHOU Mi

(Name of student)

Dedication

**This thesis is dedicated to
my father, ZHOU Shenglin,
and my mother, LIU Huaiqin.**

For their endless love and support.

謹以此論文獻給
我的父親周升林，
我的母親劉懷琴。
感謝他們無私的愛和付出。

Abstract

Previous studies have discussed how speaker-oriented adverbs (i.e. adverbs which represent speaker's judgement towards a proposition) influence a single proposition, but the phenomenon that some speaker-oriented adverbs can affect cross-propositional logic (i.e. logical relation cross multiple propositions like contradictory relation) has rarely been discussed in the relevant literature. The aim of this dissertation is to provide evidence to the latter phenomenon by the case study of Mandarin Chinese adverb 偏偏 *pianpian* through three perspectives – corpus analysis, behavior experiment and theoretical discussion.

With corpus evidence, I claim that *pianpian* is an exclusive and scalar focus particle with three levels of meanings: a. proposition of focus (current proposition *pianpian* appears in) is true; b. proposition of alternative (explicit or implicit contradictory proposition of current proposition) is false (i.e. proposition of alternative proposition is excluded); c. the speaker evaluates the current event as more unexpected or undesirable than the alternative event. These meanings related to *pianpian* sentences suggest that evaluative adverb *pianpian* affects cross-propositional logic especially through relationship of current proposition between alternative proposition or evaluation sentences sometimes occurring in preceding or following context of current proposition.

Two truth-value judgement experiments have been conducted to test the exclusiveness of *pianpian*. Experiment 1 compares *pianpian* with 只 (有) *zhi* (you) ‘only’, 還 (有) *hai* (you) ‘also’ and zero marker in a negative response environment and Experiment 2 contrasts *pianpian* with zero marker in plain environment. Results of both experiments show that *pianpian* excludes alternative propositions, which supports the claim I made in corpus analysis part that *pianpian* is an exclusive focus particle.

In the theoretical discussion part, I argue that the various behaviors of the different levels of meanings of *pianpian* sentences categorize its focus proposition (current proposition) as assertion, its alternative proposition as entailment of current proposition, expectation of alternative proposition and speaker’s evaluation of unexpectedness or undesirableness as implicature of current proposition.

In conclusion, by using corpus data, quantitative truth-value judgement experiment and related theories, this research shows that some speaker-oriented adverbs influence logical relation of related propositions (i.e. cross-propositional logic) instead of a single proposition through case study of Mandarin adverb *pianpian*.

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Chapter 1

1. Introduction

1.1. Introduction and research goal

It has long been known that speaker-oriented adverb (SOA) affects single propositions in a non-truth-conditional way (Jackendoff 1972, Traugott 1989). For example, *fortunately* is an SOA in English. When it occurs in an utterance like “Fortunately the rain stopped before we started”, the word *fortunately* expresses a subjective meaning that the speaker thinks it is fortunate that the rain stopped before we started while not changing the truth value of the original proposition. In other words, the sentence has the same truth value as a minimally similar sentence without *fortunately*, i.e., “The rain stopped before we started”. Earlier studies generally only have worked on SOAs that affect one proposition like *fortunately* which commits a kind of positive attitude towards a single current proposition (Ernst 2008, Jackendoff 1972, Jayez & Rossari 2004, Traugott 1989). However, the phenomenon that some SOAs can influence relationship cross multiple propositions is rarely discussed in the literature. It is important to study this kind of SOA as it affects the interpretation of the proposition it occurs in within the context in a way different from traditional SOAs like *fortunately*.

This study investigates how some SOAs can affect logical relation between related propositions by providing an analysis of a Mandarin SOA 偏偏 *pianpian*.

Specifically, I aim to address the following two questions in this dissertation:

- a. Whether *pianpian* can influence the logical relation of multiple propositions?
- b. How does *pianpian* influence the logical relation of multiple propositions?

1.2. Overview of the thesis

This thesis can be divided into three parts. Chapter 1 and Chapter 2 form the first part, which provides the research background and the related existing work. The second part comprises of Chapter 3, Chapter 4 and Chapter 5. This part deals with the case work of *pianpian* in detail from three perspectives – corpus analysis, behavior experiment and theoretical analysis. Chapter 6 is the third part, which presents conclusion and future work.

1.3. Data and methods

This study is based on two kinds of data – large corpus data and data collected through experiment. In the main part of the dissertation, large corpus data is adopted in Chapter 3 and Chapter 5 for syntactic, semantic and pragmatic analyses. And in Chapter 4, I collect data through two behavior experiments. Details of the data will be provided in Chapter 3 and Chapter 4.

Methods used in this dissertation include both empirical and theoretical ones. Chapter 3 presents corpus analysis which draws conclusions through basic probability statistics and theoretical analysis mainly related to focus particles. Chapter 4 provides two experiments to test the exclusiveness of the adverb *pianpian*, which include methods of behavior experiment and probability statistics¹. Chapter 5 comprises the semantic and pragmatic analyses of the scalarity and speaker-orientedness properties of the adverb *pianpian*.

1.4. Theoretical significance and contribution

Within Chinese linguistics, the core meaning and the properties of *pianpian* are established – *pianpian* is a speaker-oriented adverb (evaluative adverb) and an exclusive and strictly scalar focus particle with the semantic meaning of unexpectedness and/or undesirability. Furthermore, this dissertation has found that *pianpian* and the related adverb *pian* differs in that *pianpian* is speaker-oriented adverb and *pian* is subject-oriented adverb.

From the cross-language perspective, first, this dissertation provides Mandarin adverb *pianpian* as an example of a new type of speaker-oriented adverb. Normally, speaker-oriented adverb commits speaker's judgement towards a proposition. However, this dissertation has found that *pianpian* suggests a new kind of speaker-oriented adverb which commits speaker's

¹ The scalarity property of the adverb *pianpian* is not tested empirically in this study. Further research is needed to test it.

judgement towards the logical relation between multiple related propositions. Second, accordingly, the definition of speaker-oriented adverb needs to be modified to convey speaker's judgement towards one proposition or logical relation between multiple related propositions. Third, this research provides *pianpian* as an exclusive and strictly scalar focus particle, which adds evidence to the rarely reported dimension combination of exclusiveness and strict scalarity of focus particles. Last, this dissertation proves that a word can function as speaker-oriented adverb and focus particle at the same time. It seems semantically contradictory for a word to be both speaker-oriented adverb and focus particle since speaker-oriented adverb does not affect the proposition internal constituent but focus particle operates on the inner elements of the proposition. However, the behaviors of *pianpian* show that one word could present speaker-oriented adverb property and focus particle property at the same time. *Pianpian*, as a focus particle, operates pragmatically on the focus of the sentence, but it does not modify the focus element syntactically. Focus particle does not change the truth value of the proposition. With exclusive focus particle, focus proposition is still true and alternative proposition is determined as being false. With additive focus particle, focus proposition is still true and alternative proposition is also determined being true. With scalar focus particle, focus proposition and alternative proposition are put on some kind of scale without changing the truth value of focus particle. Non-scalar focus particles do not change the

truth value of the proposition. Focus particle operates on the inner elements of the proposition only in a semantic and pragmatic way. On the other hand, speaker-oriented adverb affects the proposition in a syntactic and semantic way – it modifies the sentence by committing the speaker’s judgement towards the proposition. The properties of focus particle and speaker-oriented adverb are not contradictory but consistent in that they do not change the truth value or the semantic content of the proposition.

Chapter 2

2. Literature Review

2.1. Speaker-Oriented Adverb (SOA)

Researches generally agree that speaker-oriented adverbs² are adverbs expressing speaker's judgement towards a proposition³—to be more specific, the event described in the proposition. SOA is not part of the truth-conditional meaning of the proposition, but they are presented to make a specific kind of commitment to the content of the proposition (Bach 1999, Bonami & Godard 2006, Jackendoff 1972, Jayez & Rossari 2004, Potts 2005, Traugott 1989). Note that sentence (1) has a SOA *fortunately*, and its corresponding sentence (2) lacks it. These two sentences have the same truth-conditional meaning, that is, “after a week or two, the public grew bored with the subject and it slipped away like a bear in winter”. However, sentence (1) presents the speaker's evaluation of the event, that is, s/he thinks it is fortunate that the event happened. Sentence (2), on the other hand, does not include the speaker's judgement towards the event.

² Schreiber (1971) stated that strictly pragmatic adverbs like *frankly* and *briefly* are the only ones that are speaker-oriented adverbs, however, we adopt a broader definition of speaker-oriented adverbs in this research. Speaker-oriented adverbs/adverbials could also be called as sentential adverbs/adverbials (Traugott 1989).

³ A proposition is the intension of a sentence, the truth value of which can be evaluated in a possible world. For instance, ‘John went to the party’ is a proposition.

(1) Fortunately, after a week or two, the public grew bored with the subject and it slipped away like a bear in winter.

(2) After a week or two, the public grew bored with the subject and it slipped away like a bear in winter.

SOA can usually be divided into three sub-classes – evaluative adverb, modal adverb and evidential adverb (Jackendoff 1972, Traugott 1989). Evaluative adverb concerns with the speaker’s evaluation of a proposition (Bach 1999, Bonami & Godard 2006, Jayez & Rossari 2004, Potts 2005). For instance, *fortunately* in (1) is an example of evaluative adverb. Evaluative adverb also includes *luckily, happily, surprisingly* etc.

The second sub-type is modal adverb. Modal adverb assigns a degree of likelihood to a proposition (Schreiber 1971). *Probably* is an example of modal adverb. When comparing sentence (3) with sentence (4), the only difference is that sentence (3) has the adverb *probably* while sentence (4) does not. In sentence (3), the speaker conveys that there is a large possibility that Tom is a bit older than Mary. By contrast, in sentence (4), the speaker does not assign likelihood to the event, which by default indicates that the speaker is 100% sure that the proposition is true.

(3) Tom is probably a bit older than Mary.

(4) Tom is a bit older than Mary.

Other modal adverbs include *possibly*, *perhaps* etc.

Another sub-type of SOA is evidential adverb. Evidential adverb⁴ expresses that a proposition can be inferred on the basis of evidence (Simon-Vandenberg & Aijmer 2007). *Obviously* is a typical evidential adverb, which shows that the speaker thinks that the evidence for an event is quite obvious to notice. The meaning *obviously* contributes to the proposition is shown by the difference between sentence (5) and sentence (6). In (5), the speaker thinks that there is very obvious evidence to support that Tom feels very passionate about music. By contrast, sentence (6) does not say anything about the evidence of the event.⁵

(5) Tom obviously feels very passionate about music.

(6) Tom feels very passionate about music.

Adverbs like *clearly*, *evidently* etc. are some other examples of evidential adverb.

Like English, Mandarin Chinese also has these three sub-classes of SOA.

Mandarin evaluative adverb includes 幸虧 *xingku* ‘fortunately’, 不幸 *buxing* ‘unfortunately’ and 偏偏 *pianpian* ‘unexpectedly, contrarily’⁶ etc.

⁴ For the broad definition of evidentiality, see (Chafe 1986, Palmer 1986).

⁵ Based on Grice’s cooperative principle, all utterances by default should have adequate evidence.

⁶ 偏偏校長也想去。

pianpian xiaozhang ye xiangqu

Pianpian the principal also wants to go. (Yu 2007, Zhang 2014)

The proposition that the principal also wants to go is a complete proposition and the

Mandarin modal adverb includes 大概 *dagai* ‘probably’, 也許 *yexu* ‘possibly’, 肯定 *kending* ‘definitely’. For mandarin evidential adverb, two typical examples are 顯然 *xianran* ‘obviously’ and 好像 *haoxiang* ‘apparently’ (Ernst 2008, Yu 2007).

The analysis of the function of *pianpian* in previous literature is not clear or precise, For example, Yu (2007)’s interpretation of *pianpian* as *contrarily* is problematic. *Pianpian* in (7) cannot be understood as *contrarily* as people (here they and Xiao Li) cannot be in an exact opposite relation which the meaning of *contrarily* requires. In fact, the main goal of this thesis is to develop a detailed analysis of the meaning of *pianpian* and its usage in context.

(7) 他們都去北京了，偏偏小李沒去。

tamen dou qu Beijing le, pianpian Xiao Li mei qu.

‘They all went to Beijing, *pianpian* Xiao Li did not go.’

Previous studies have already observed that speakers use SOA not to change the content of propositions but to commit certain subjective judgements towards the propositions. However, such observations are only concerned with the judgements towards the current proposition, i.e. the proposition in the same sentence as the SOA. What is rarely explored is how evaluative

adverbs *pianpian* does not contribute to the truth value meaning of the proposition but commits a kind of judgement of the speaker.

meaning of SOA can interact with relation of multiple propositions – relation between related propositions and current proposition. As I will show in the rest of this thesis, *pianpian* exemplifies this kind of SOA whose interpretation interacts with a particular group of related propositions rather than a single proposition. For instance, in the utterance (8), intuitively and logically, the meaning of the adverb *pianpian* is associated with the relation of the proposition that he is wearing a coat, and the fact that this happens on a very hot day, and the implicit common sense that people are not supposed to wear coats in hot days.

(8) 天氣這麼熱，他偏偏穿了一件大衣。

tianqi zheme re, ta pianpian chuanle yijian dayi.

‘It is a very hot day, he *pianpian* is wearing a coat.’

Reason of adverb *pianpian* showing this interesting behavior is that it is a focus particle as well. The propositions related to the interpretation of the speaker-oriented meaning of *pianpian* are current proposition (i.e. the proposition *pianpian* appears in⁷) and alternative proposition (i.e. the proposition which contains the alternative of focus of *pianpian* sentence). In

⁷ Technically, *pianpian* cannot appear in any proposition since it is not truth-conditional. Here it means the proposition in the same sentence which *pianpian* appears in.

the next section, I will review focus particle, alternative proposition and previous studies on *pianpian*.

2.2. Focus particle

2.2.1. Neutral focus and contrastive focus⁸

Focus is new information of a sentence. It usually can be divided into neutral focus and contrastive focus (Liu & Xu 1998, Gussenhoven 2008, Li & Duanmu 2017). Neutral focus is usually the last word in a sentence which defaultedly conveys semantically prominent information (Liu & Xu 1998, Gussenhoven 2008, Li & Duanmu 2017). On the other hand, Contrastive focus⁹ is broadly defined as information in a sentence which introduces alternative(s) of elements associated with meaning interpretation (Gotzner & Spalek 2014, Krifka 1999, Rooth 1992).

Sentence (9) is an example of neutral focus in an English sentence and sentence (10) is an example of contrastive focus in an English sentence. Compared with neutral focus, contrastive focus always has corresponding alternatives. In sentence (9), the contrastive focus a RENAULT CLIO is contrasted with the explicit alternative Ford Caori, while the neutral focus a

⁸ I do not discuss broad focus in this research as Jin (1996) has found that it is difficult to distinguish broad focus and narrow focus on the last word in Mandarin.

⁹ Although I adopt Rooth's (1992) and Krifka's (1992) definition of alternative focus, I do not follow their idea of focus having syntactic effects (See Halliday 1967, Chomsky 1972, von Stechow 1985/1989 and Steedman 2000 for this view). In fact, I agree with the view that focus affects meaning in a pragmatic way instead of syntactic way (See Dryer 1994, Kadmon 2001, Liu & Xu 1998, Roberts 1996, Schwarzschild 1997 and Williams 1997).

RENault CLIO (9) is merely the new information and is not contrasted with any alternative.

(9) Has she driven any other cars besides Fords and Chevrolets?

She used to drive [a RENault CLIO] F.

(10)Helen used to drive a Ford Capri.

No, she used to drive [a RENault CLIO] F. (Gussenhoven 2008)

Sentence (11) is an example of Mandarin neutral focus. The last word (here Beijing) usually is the focus. Sentence (11) is a plain statement and neutral focus 北京 ‘Beijing’ is new information which is not contrasting to any alternatives. Sentence (12), on the other hand, is an example of Mandarin contrastive focus. The focus 北京 ‘Beijing’ is contrasted with the alternative 上海 ‘Shanghai’. Unlike neutral focus, contrastive focus can be any element of the sentence depending on different contexts.

(11)他昨天坐飛機去[北京]F了。

ta zuotian zuo feiji qu Beijing le

‘He went to Beijing by air yesterday.’

(12)他沒去上海，昨天坐飛機去[北京]F了。

ta mei qu Shanghai, zuotian zuo feiji qu Beijing le

‘He didn’t go to Shanghai. He went to Beijing by air yesterday.’

Normally nuclear pitch accent acts as the phonological cue for focus in both English and Mandarin according to theoretical and experimental studies (Cohan 2000, Kristensen et al. 2013, Ladd 1996, Li & Duanmu 2017, Li et al. 2008 and Wang & Chu 2013). (See sentence (9) to sentence (12) as examples: all neutral and contrastive foci are stressed.)

However, sometimes focus is not marked by pitch accents (Beaver & Clark, 2008). Beaver & Clark (2008) discussed the phenomena of ‘accentless focus’ (or phonologically invisible focus in Partee’s discussion) (see Partee 1999 and Kadmon 2001 for similar discussion). This type of focus is not marked by pitch accents. An example of accentless focus is from Vallduví (1990, 1992: 150):

(13)[A last-minute guest arrives at host’s house. The host has known the guest’s family for years.]

A: I’m glad you could come for dinner. Had I known before, I wouldn’t have made pig’s feet.

B: I love pig’s feet. It’s my SISTER who only eats prime cuts.

The associate of focus, here ‘prime cuts’, does not appear explicitly in the previous context. Therefore, this example is acceptable only when A knows that one of B’s family members only eats prime cuts. Another thing to notice is that prime cuts is not prosodically prominent in (13) (Beaver & Clark 2008).

Typologically, other than prosodic strategy, languages use different strategies or combination of various strategies for focus marking, see Lee et. al 2008 for typological similarities and dissimilarities of languages to mark focus by strategies of prosody, morphology, syntax or a combination of different strategies.

2.2.2. Contrastive focus, alternative, focus proposition (P_F) and alternative proposition (P_{ALT})

Contrastive focus is related to a set of alternatives (Jackendoff 1972, Rooth 1985). For example, John is the focus in sentence (14). And Mike, Tom, David etc. are corresponding alternatives of the focus John.

(14)[JOHN]_{Focus} also likes Chinese food.

Focus = [John]

Alternative = [Mike, Tom, David...]

Except being implicit as in sentence (14), alternatives can also be explicit in the context:

(15)A: Mike likes Chinese food.

B: [JOHN]_{Focus} also likes Chinese food.

The alternative Mike appears explicitly in this context.

Focus = [John]

Alternative = [Mike]

I call the proposition associated with focus such as “John likes Chinese food” focus proposition (P_F) and the proposition associated with alternative like “Mike likes Chinese food” alternative proposition (P_{ALT}). For (15), I present its P_F and P_{ALT} as follows:

P_F = John likes Chinese food.

P_{ALT} = Mike likes Chinese food.

Pianpian always indicates a contrastive focus in its scope. Semantic and pragmatic factors determine which element in the scope of *pianpian* is the focus and therefore obtaining attentional resources through pitch accent in spoken form.

For instance, 北京 ‘Beijing’ is the focus the sentence (16), and the corresponding alternative is 上海 ‘Shanghai’. However, if the previous context of sentence (16) is changed to 他沒坐火車 ‘He didn’t go by train’, then 坐飛機 ‘by air’ is focus and its alternative is 坐火車 ‘by train’. In sentence (16), 北京 ‘Beijing’ is stressed and is contrasted with the alternative 上海 ‘Shanghai’. With *pianpian*, the sentence expresses the speaker’s evaluation that it is more unexpected and/or undesirable for him to go to Beijing than Shanghai comparing with the sentence without *pianpian*. In sentence (17), since no explicit alternative is given in the context, focus is not determined. 昨天 ‘yesterday’, 坐飛機 ‘by air’, Beijing can all possibly be focus and take the stress depending on more contextual information.

Nevertheless, with *pianpian*, there is always an element in the sentence being contrastive focus. And *pianpian* also conveys speaker's evaluation that the focus is more unexpected and/or undesirable than its alternative.

(16) 他沒去上海，偏偏昨天坐飛機去[北京]F了。

ta mei qu Shanghai, pianpian zuotian zuo feiji qu Beijing le

'He didn't go to Shanghai. He pianpian went to Beijing by air yesterday.'

F = Beijing

Alt = Shanghai

(17) 他偏偏[昨天]F1[坐飛機]F2去[北京]F3了。

ta pianpian zuotian zuo feiji qu Beijing le

'He pianpian went to Beijing by air yesterday.'

2.2.3. Exclusiveness and scalarity of focus particles

Focus particles, like other kinds of focus-sensitive expressions, indicates a contrastive focus is in the scope of the particle (Gast 2006, König 1991/2002 etc.). *Also*, in (14) (John also likes Chinese food) is an example of focus particle. With *also*, the sentence necessarily has a focus in the scope of *also*.

Usually, focus particles can be categorized along two dimensions, each with two levels, i.e. whether a focus particle is exclusive (restrictive) or additive (inclusive) and whether it is scalar and/or non-scalar (König 1991/2002).

Exclusive means that the alternative(s) of the focus are not possible variables for interpreting the sentence, for instance, English *only*, *merely* and *only*-like expressions are exclusive focus particles. For the example sentence “John only invited Lucy for dinner”, the alternatives of Lucy (i.e. Mary, Tom etc.) are excluded when Lucy is the focus.

On the other hand, additive indicates that the truth condition of the proposition remains true when alternative(s) are substituted for focus. The additive category is best exemplified by English *also*, *even*, and their counterparts in other languages. Sentence (18) is an example sentence of *also*. It indicates that the focus proposition “our families have been working hard” is true and the alternative proposition “we have been working hard” is also true. This is different from the situation for exclusive focus particles with which the alternative propositions are false.

(18) We have been working hard, and our families have also worked hard.

The component of scalar and/or non-scalar uses measures a kind of ordering property of focus and alternative(s) elements in the perspective of the related event in the context, with scalar reading having such an order and non-scalar use lacking it respectively (Gast 2006, König 1991/2002).

Even and *even*-like operators are usually utilized in the literature to exemplify scalar interpretation (Gast & Van der Auwera 2011, Karttunen & Karttunen 1977, Kay 1990 and König 1991/2002) (See (Giannakidou & Yoon 2016) for non-scalar use of *even*). (See (19) for an example of scalar use of focus particle *even*.)

(19) *Even* John came.

a. $\exists x[(x=\text{John}) \ \& \ \text{came}(x)]$

b. $\exists y[(y \neq \text{John}) \ \& \ \text{came}(y)]$

c. $(\forall y)[(y \neq \text{John} \ \& \ \text{came}(y)) \rightarrow \text{exceeds}$

$(\text{unlikelihood}(\text{came}(\text{John}), \text{unlikelihood}(\text{came}(y)))]$

Also is an example of non-scalar focus particle (König, 2002).

(20) *John also* came.

a. $\exists x[(x=\text{John}) \ \& \ \text{came}(x)]$

b. $\exists y[(y \neq \text{John}) \ \& \ \text{came}(y)]$

Note that (19) has the scalar reading of John being less likely to come (compared with other people); while there is no possible scalar reading for (20).

The two dimensions of focus particle being additive/exclusive or scalar/non-scalar are independent, i.e. multiple combinations are possible – additives can

be scalar (e.g. *even*) or non-scalar (e.g. *also*), and exclusives can also be scalar or non-scalar. However, it is rare to have the combination of exclusive and scalar. As is shown in literature, *jupu* in Gurindji is probably the only particle typologically reported to have both exclusive use and scalar use (no non-scalar use is reported under any context). *_Jupu_* is an invariant sentence adverb, which often be translated as *_just_or_only_* (on the S-adverb sense). It modifies expectations about the whole sentence, the predicate or verb, but is never used in the sense of *_only_* qualifying an NP (McConvell 1983). If a focus particle is exclusive and scalar at the same time, it produces two results: a) that the focus proposition is true, and the alternative proposition is false and b) that focus proposition and alternative proposition are put on some kind of scale. For exclusives, *only* is probably the most likely candidate for being both exclusive and scalar. For instance, in (21) *only* shows exclusive use and scalar use. ‘Three’ is the focus of the sentence. And all larger numbers ($n > 3$) are alternatives which are excluded. Note that (21) has scalar interpretation only because the number of apples is a natural scalar concept triggered by the numeral three in the context. However, *only* sentences do not constantly express scalar meaning as the scale is derived from the context – both the existence of the scale and parameter of the dimension of the scale. If the focus of *only* sentence cannot trigger any natural scale, it displays no scalar meaning. For example, in (22), *only* only shows exclusive use but no scalar use as ‘John’

cannot trigger any scalar meaning (unlike the number three in (21)). (Gast 2012, Horn 1996, König 2002).

(21) John only ate three apples.

a. $\exists=3x[\text{apple}(x) \ \& \ \text{John_ate}(x)]$

b. $\neg\exists>3y[\text{apple}(y) \ \& \ \text{John_ate}(y)]$

c. $(\forall>3y)[\text{apple}(y) \ \& \ \text{John_ate}(y) \ \rightarrow \ \text{exceeds}(\text{cardinal number}(\text{John_ate}(\text{more than three}(y))), \text{cardinal number}(\text{three}(y))]$

(22) Only John came.

a. $\exists x[(x=\text{John}) \ \& \ \text{came}(x)]$

b. $\neg\exists y[(y\neq\text{John}) \ \& \ \text{came}(y)]$

Only when focus is on a natural scale will *only* be used as a scalar and exclusive focus particle. However, it is rare to find exclusive and strictly scalar focus particles. Strictly scalar property has two levels of meaning: a) the scalar meaning always exists whenever the particle is used and b) the scalar interpretation is not derived from context but brought by the focus particle itself. In this study, *pianpian* is proposed to be an exclusive and strictly scalar focus particle.

2.3. Previous studies on *pianpian*

Nearly all relevant previous studies noticed that *pianpian* is an SOA (Yang 2007, Hong 2012, Guo 2014 and Zhang 2014). Most of them classify it into the sub-class of evaluative adverb (Yang 2007, Hong 2012, Guo 2014 and Zhang 2014), but some others state it is a mood adverb (Chen 2008, Liu 2010, Xu 2013 and Yu 2013).

Literature does not agree on the subjective meaning *pianpian* expresses - some researchers argue it is associated with unexpectedness (Beida Zhongwenxi 1982, Ding 2005, Liu 2010, Yu 2013 and Fan 2009), while others argue it is associated with discontent (Fan 2009, Hu 2009). For example, the subjective meaning of *pianpian* expresses in sentence (23) is either analyzed as unexpectedness felt by the speaker that the character chooses to ride the bike rather than using the car (unlike what people normally would do) according to the former claim or discontent of the speaker that the character chooses to ride the bike while he could use the car (the speaker thinks he should use the car when he could according to the latter group of researchers).

(23)他放著小轎車不坐，偏偏騎自行車。

ta fangzhe xiaojiaoche bu zuo, pianpian qi zixingche

‘He could use the car, but he *pianpian* chooses to ride the bike.’

In Xiandai Hanyu Xuci Lishi¹⁰, *pianpian* is defined as:

- a) an action or behavior is out of expectation and counters a desire, reasoning or requirement,

(24) 壽生說得很低聲，可是林大娘卻偏偏聽見了。

shousheng shuode hen disheng, keshi lin daniang que pianpian
tingjianle

‘Shousheng was speaking in a very low voice, but Ms Lin pianpian
heard it.’

- b) expressing the strong determination and faith of an agent determining to
conduct an action;

(25) 我叫他別走了，可是他偏偏要去。

wo jiao ta bie zou le, keshi ta pianpian yaoqu

‘I asked him not to go, but he pianpian wanted to go.’

- c) only, just

(26) 大家都走了，偏偏他一個人不走。

dajia dou zou le, pianpian ta yi ge ren bu zou.

‘They are all gone, pianpian he is still staying here.’

¹⁰ Xiandai Hanyu Xuci Lishi is written by students of Department of Chinese Language and Literature of Peking University in 1982.

The second meaning listed in *Xiandai Hanyu Xuci Lishi* is not supposed to be the meaning of *pianpian*, but it somehow describes the meaning of a historically related adverb *pian* which I will discuss in the last chapter.

The first meaning and the third meaning seem to explain some example sentences respectively, but it is not clear how to judge which sentence should be explained by which meaning and how these two seemingly unrelated meanings can be represented by one adverb *pianpian*.

Fan (2009) described *pianpian* as an evaluative adverb which expresses that a fact is out of the speaker's expectation and therefore contains the speaker's unexpectedness or discontent. Hong (2012) labeled *pianpian* as an evaluative adverb expressing the speaker's desire with a negative valence. Ding (2005), Liu (2010) and Yu (2013) argued that *pianpian* is a mood adverb with the meaning of unexpectedness. Xu (2013) stated that *pianpian* is a mood adverb which forms the contradiction of meanings and expresses the speaker's attitude and evaluation towards the agent. Hu (2009) claimed that *pianpian* is an intensifier which means that the agent intentionally acts against some requirement or some objective fact or that the objective fact counters the subjective wishes. He mentions that *pianpian* is also an evidential marker.

For typical *pianpian* sentences like sentence (23), Fan (2009) and Hong (2012) agreed that *pianpian* is an evaluative adverb but disagree on the subjective meaning it expresses. Furthermore, Ding (2005), Liu (2010), Yu (2013) and

Xu (2013) analyzed *pianpian* as a mood adverb. Different from the above two views, Hu (2009) stated that *pianpian* is an intensifier. On the other hand, these studies did not provide an instant analysis of the core meaning of *pianpian* – subjective meanings including unexpectedness, discontent, negative desire etc. are proposed under different contexts.

From the above review, we can see that literature disagrees on whether *pianpian* is an evaluative adverb, a mood adverb or an intensifier, what subjective meanings *pianpian* expresses and how these meanings are derived and how they can co-occur in one word (Ding 2005, Fan 2009, Hong 2012, Hu 2009, Liu 2010, Xu 2013 and Yu 2013).

Literature from perspectives of both Mandarin focus particles and SOA pays no or little attention to focus particle function of *pianpian* (Ding 2005, Fan 2009, Hong 2012, Hu 2009, Liu 2010, Xu 2013 and Yu 2013). Only Liu (2008), Guo (2014) and Zhang (2014) labelled *pianpian* as focus particle though without detailed analysis. Guo (2014) stated that *pianpian* is a mood adverb as well as a focus-sensitive operator. According to Zhang (2014)'s analysis, *pianpian* is an evaluative adverb which could express the meaning of expectedness and desire and the pragmatic functions of *pianpian* are information focus salience, presupposition indication and referent restriction.

In (27) *pianpian* indicates 也想去 ‘also wants to go’ as the focus. It induces the alternative 不想去 ‘does not want to go’. The event 校長也想去 ‘The

principal also wants to go’ is the focus event and the event 校長不想去 ‘The principal does not want to go’ is the alternative event. While in (28) *pianpian* indicates 校長 ‘the principal’ as the focus. It induces 其他人 ‘other people’ as the alternative. The event 校長也想去 ‘The principal also wants to go’ is the focus event and the event 其他人也想去 ‘Other people also want to go’ is the alternative event.

(27) 校長偏偏也想去。

xiaozhang pianpian ye xiang qu.

‘The principal *pianpian* also wants to go.’

(28) 偏偏校長也想去。

pianpian xiaozhang ye xiang qu.

‘*Pianpian* the principal also wants to go.’ (Zhang 2014)

From the perspective of discourse, Zhang (2014) argued that *pianpian* functions as a conjunct to add exceptional information which forms supplementary relationship with preceding clause.

To sum up, previous studies have discussed both the adverb aspect and the focus particle aspect of *pianpian*. However, it is still not clear:

- a) How are the subjective meanings of unexpectedness and discontent derived?

b) How can subjective meanings of unexpectedness and discontent co-occur in one word?

c) What is exactly the focus particle property of *pianpian*?

2.4. *Pianpian* as an SOA and a focus particle

As I have mentioned in the earlier section, theoretically and logically it is possible for focus particles to integrate components of exclusive and scalar use. This study proposes that the Chinese adverb *pianpian* is a strictly scalar and exclusive focus particle.

Pianpian is associated with a contrastive focus which is usually right-adjoined to it¹¹. For instance, example (29) shows different foci in *pianpian* sentences. We can see that these foci are positioned to the right of the adverb *pianpian*.

(29)a. 偏偏[他的提案]_{Focus} 在大會上被否決了。

pianpian ta de tian zai dahui shang bei foujue le.

‘*Pianpian his proposal was rejected on the meeting.*’

b. 他的提案偏偏[在大會上]_{Focus} 被否決了。

tade tian pianpian zai dahui shang bei foujue le.

¹¹ Stress also affects the identification of focus, but this study does not cover the function of stress.

‘His proposal *pianpian* was rejected on the meeting.’

c. 他的提案在大會上偏偏[被否決了] Focus ◦

tade tian zai dahui shang pianpian bei foujue le.

‘His proposal on the meeting *pianpian* was rejected.’ (Guo 2014)

In (29), 他的提案 ‘his proposal’ is the focus and 其他提案 ‘other proposals’ are the alternatives; in (29), 在會議上 ‘on the meeting’ is the focus and 在其他情況下 ‘in other situations’ are the alternatives; and in (29), 被否決 ‘was rejected’ is the focus and 被接收 ‘was accepted’ is the alternative.

Pianpian sentence is related to two propositions in terms of interpreting focus and alternative(s) – focus proposition and alternative proposition(s).

For instance,

(30) 約翰偏偏不喜歡中國菜。

yuehan pianpian bu xihuan zhongguo cai.

‘John *pianpian* doesn’t like Chinese food.’

P_F = John doesn’t like Chinese food.

P_{ALT} = John likes Chinese food.

I propose *pianpian* to be a speaker-oriented adverb (to be more specific, an evaluative adverb) as well as a strictly scalar exclusive focus particle, which means:

- (i) *Pianpian* does not contribute to the truth-conditional meaning of the current proposition but adds the speaker's evaluation to its semantic content. With *pianpian*, the focus proposition is true.
- (ii) *Pianpian* disallows the alternative(s) (explicit or implicit) to be possible answers for the open sentence (what the speaker takes as the Current Question) in the scope of the particle. In other words, with *pianpian*, the alternative proposition is false.
- (iii) *Pianpian* displays only scalar reading of the sentence without non-scalar reading in any context. The scale *pianpian* induces to the understanding of the sentence is constant in the direction of ordering and complex as to the parameter of dimension - ranking focus element at higher level of ordering (approaching the maximum value) with the scale of unexpectedness and/or undesirability.

In the following three chapters, I will investigate the research questions in detail and provide evidence for my proposal from three different perspectives – in Chapter 3, I discuss and analyze corpus data; in Chapter 4, I conduct two behavior experiments and in Chapter 5, I provide theoretical discussion.



Chapter 3

3. Corpus Data Analysis: *Pianpian* as an Exclusive and Strictly Scalar Focus Particle

This chapter provides evidence to the proposal of Chapter 2 from corpus study. Section 3.1 and section 3.2 give detailed description of the data adopted in this study and data annotation criteria and result. Section 3.3 discusses the corpus evidence for *pianpian* to be an SOA. Specifically, I argue that *pianpian* does not change the truth-conditional meanings of propositions but commits speaker's evaluation towards them and that *pianpian* is higher in the syntactic hierarchy and usually occurs before normal adverbials (including negative adverbs, degree adverbs etc.). Section 3.4 discusses the corpus evidence for *pianpian* to be an exclusive and strictly scalar focus particle, Specifically, I argue that *pianpian* shows the meaning of exclusiveness and the scalarity meaning of unexpectedness and/or undesirableness. Section 3.5 summarizes the core meaning of *pianpian*.

3.1. Data retrieval from CCL Contemporary Chinese Corpus

The data used in this study is mainly from CCL Contemporary Chinese Corpus, which contains 581,794,456 Chinese characters. I retrieved 3740 *pianpian* sentences from the CCL Contemporary Chinese Corpus, among which I extracted a random sample of 500 sentences with preceding context

and following context¹². I then precluded 68 *pianpian* sentences in which (a) *pianpian* is mistakenly used as the subject-oriented adverb *pian*¹³, or (b) *pianpian* is quoted as an example word, or (c) context information is missing. In the example (31) below, I give an example of each category of exclusion. 432 *pianpian* sentences remained in the dataset after the exclusion.

(31)a.*他不讓我回家，我偏偏要回家。

ta bu rang wo huijia, wo pianpian yao huijia

‘He doesn’t let me go home, I *pianpian* want to go home’

b.屬於這一類的有“偏偏、遠遠、太”等。

shuyu zhe yi lei de you “pianpian, yuanyuan, tai” deng

‘Adverbs including *pianpian*, *yuanyuan*, *tai* etc. belong to this category’

c.白溝偏偏？

Baigou pianpian?

‘Baigou pianpian?’

3.2. Data annotation

¹² Preceding context defined in this research is usually a window of 50 Chinese characters before the word *pianpian* and following context is usually a window of 50 Chinese characters after *pianpian*. We also call the part after the *pianpian* clause “following context”.

¹³ Difference of *pianpian* and *pian* will be discussed in the last chapter.

I annotated the sample data for the following aspects of information:

- a. Focus in the *pianpian* sentence (*Pianpian* is very frequently left-adjoined to its scope within which focus can be identified. And focus is the phrase which has explicit or inferred alternative(s));
- b. Syntactic types of focus in *pianpian* sentence (Whether they can function as subject, object, verb predicate, adjective predicate, adverbial or modifier of NP in a sentence);
- c. Whether alternative(s) are explicit in the context;
- d. Whether alternative(s) are explicitly excluded in the context;
- e. Whether unexpectedness is explicitly marked in the context;
- f. Whether undesirableness is explicitly marked in the context.

The following two graphs provide answers for b and c. Other annotation information will be discussed in later sections.

Figure 1 shows the syntactic types of foci *pianpian* associates, from which we can see that focus in a *pianpian* sentence most frequently occurs as predicate or object. These two components usually provide new information in a sentence which is consistent with the new-information property of focus. Subject is relatively less taken by focus as it usually expresses old information.

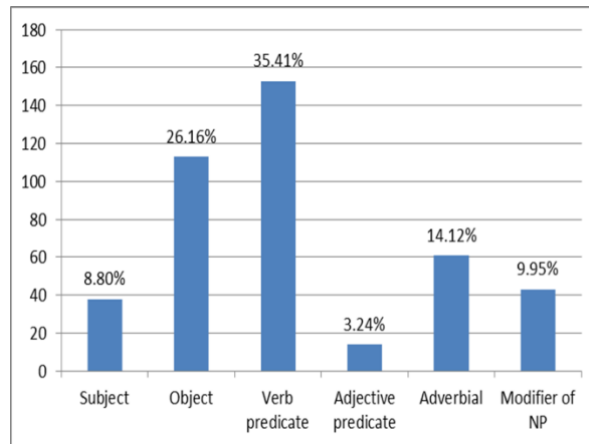


Figure 1 Syntactic types of focus in *pianpian* sentence

Figure 2 shows whether alternative(s) are marked or unmarked: in approximately half of the data (204 tokens, 47.22%), alternative(s) are marked explicitly in the discourse; about one fourth of alternative(s) can be inferred from semantic meanings of foci (i.e. whether focus contains negated expression or other contradiction triggering expressions); the left one fourth of alternative(s) are unmarked.

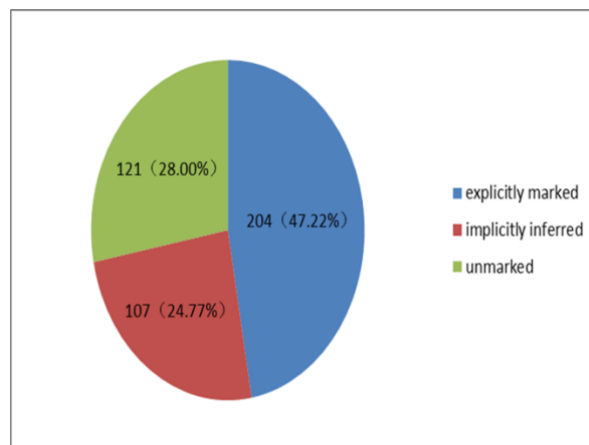


Figure 2 How alternatives (of focus in *pianpian* sentence) are marked

3.3. *Pianpian* as an SOA

Pianpian is an SOA, which expresses the speaker's evaluation. It does not affect the truth-value of the proposition it appears in. In a sentence such as 老天偏偏下起了雪 'It *pianpian* has started to snow', the speaker uses *pianpian* to evaluate the whole proposition 老天下起了雪 'It has started to snow' and at the same time the truth-conditional content of the proposition maintains.

Pianpian can occur in both realis and irrealis sentences to express evaluative meaning. Like other evaluative adverbs, *pianpian* has a higher position in the syntactic hierarchy and usually appears in front and mid positions in a sentence.

3.3.1. *Pianpian* expresses speaker's evaluation

Generally, *Pianpian* expresses speaker's evaluation in realis¹⁴ sentences. The focus proposition of *pianpian* is usually an event which happens or exists in the actual world, and the speaker uses *pianpian* to evaluate this realis event. For instance,

(32) 眼看該上班了，可，老天偏偏下起了雪。

yankan gai shangban le, ke, laotian pianpian xiaqi le xue.

¹⁴ Mithun (1999) described the distinction of realis modality and irrealis modality as "The realis portrays situations as actualized, as having occurred or actually occurring, knowable through direct perception. The irrealis portrays situations as purely within the realm of thought, knowable only through imagination" (See also Palmer 1986).

‘It is almost time to go to work, but, it *pianpian* has started to snow.’

(33)這些不起眼而又不容易做到的事，文明的張家港人偏偏做好了。

zhexie buqiyan er you bu rongyi zuodao de shi, wenming de
Zhangjiagang ren pianpian zuohao le.

‘These are tiny and difficult things. The civilized citizens of
Zhangjiagang *pianpian* did them well.’

In these two sentences, 老天下起了雪 ‘It has started to snow’ and 文明的張家港人做好了 ‘the civilized citizens of Zhangjiagang did them well’ are typical realis events. And *pianpian* represents speakers’ evaluation towards these propositions without changing their truth-conditional level of meanings. This argument is supported by the fact that the truth-conditional content of a *pianpian* sentence remains the same when we remove *pianpian* from the sentence. The above two examples (32) and (33) are re-marked as (34) and (35) after deleting *pianpian* from the original versions:

(34)眼看該上班了，可，老天 ∅ 下起了雪。

yankan gai shangban le, ke, laotian pianpian xiaqi le xue.

‘It is almost time to go to work, but, it has started to snow.’

(35)這些不起眼而又不容易做到的事，文明的張家港人 ∅ 做好了。

zhexie buqiyian er you bu rongyi zuodao de shi, wenming de
Zhangjiagang ren pianpian zuohao le.

‘These are tiny and difficult things. The civilized citizens of
Zhangjiagang did them well.’

Comparing (32) and (34), (33) and (35) respectively, we can see that the truth-conditional content of focus proposition maintains: 老天偏偏下起了雪 ‘It pianpian has started to snow’ and 老天下起了雪 ‘It has started to snow’ truth-conditionally both express that snowfall happened in the near past and will continue for some time; and 文明的張家港人偏偏做好了 ‘the civilized citizens of Zhangjiagang pianpian did well’ and 文明的張家港人做好了 ‘the civilized citizens of Zhangjiagang did well’ both represent same truth-conditional meaning that people in Zhangjiagang did these things well.

Pianpian sometimes also occurs in irrealis sentences. For example,

(36) 如果本不是“最低”，偏偏又要打出最低的廣告，那就是欺騙
行為了。

ruguo ben bu shi zui di, pianpian you yao da chu zui di de guanggao,
na jiu shi qipian xingwei le.

‘If their price is not the lowest, and they pianpian promote their
products for low price, then it is committing fraud.’

(37)如果你偏偏是一個膽怯的人，只是不得已才過上獨身生活，那你就更容易感受到芸芸眾生施於你的壓力了。

ruguo ni pianpian shi yige danqie de ren, zhishi budeyi cai guoshang le dushen shenghuo, na ni jiu geng rongyi danshou dao yunyun zhongseng shiyu ni de yali le.

‘If you are pianpian timid and you only choose to be single against your will, you will feel more pressure from people around you.’

After removing *pianpian* in these two examples, I re-label them as (38) and (39).

(38)如果本不是“最低”，Ø又要打出最低的廣告，那就是欺騙行為了。

ruguo ben bu shi zui di, pianpian you yao da chu zui di de guanggao, na jiu shi qipian xingwei le.

‘If their price is not the lowest, and they pianpian promote their products for low price, then it is committing fraud.’

(39)如果你 Ø 是一个胆怯的人，只是不得已才过上独身生活，那你就更容易感受到芸芸众生施于你的压力了。

ruguo ni shi yige danqie de ren, zhishi budeyi cai guoshang le dushen shenghuo, na ni jiu geng rongyi danshou dao yunyun zhongseng shiyu ni de yali le.

‘If you are timid and you only choose to be single against your will,
you will feel more pressure from people around you.’

In (38), the antecedent of conditional is the same as (36) – 他們的價格不是最低的 ‘their price is not the lowest’. Similarly, (37) and (39) have the same antecedent of conditional – 你是一個膽怯的人 ‘you are timid’.

From these comparisons, we can see that *pianpian* does not affect the truth-conditional level of meaning in irrealis situations either. *Pianpian* and conditional markers (and other irrealis modality markers) are separate operators acting on the truth-conditional content. The existence of irrealis markers does not influence the function of *pianpian*.

The fact that *pianpian* does not change the truth-conditional contents of both realis sentences and irrealis sentences shows that *pianpian* is a subjective adverb which expresses the speaker’s evaluation to either a realis event or an irrealis event.

3.3.2. *Pianpian* is a subjective adverb

Pianpian is higher in the syntactic hierarchy and usually occurs before negatives adverbs, event modals, degree adverbials, adverbial of time and adverbial of place.

- 1) *Pianpian* occurs before negative adverbs

Pianpian only occurs before negative adverbs 不 *bu* ‘not’ and 沒有 *meiyou* ‘not’, and never occur after them. For example,

(40)a. 他偏偏沒有去北京。

ta pianpian meiyou qu Beijing.

‘He pianpian didn’t go to Beijing.’

b.*他沒有偏偏去北京。

ta meiyou pianpian qu Beijing.

* ‘He didn’t pianpian go to Beijing.’

Sentence (40) is grammatical and sentence (40) is ungrammatical as negative adverb 沒有 *meiyou* ‘not’ cannot appear before *pianpian*. *Pianpian* is a subjective adverb conveying speaker’s evaluation which cannot be negated. This is different from fact-based content which contrarily can be negated. But there is some device to challenge or disagree with some subjective information. For (40), a legal way to express disagreement is to say, “I don’t find it surprising at all”.

The following are two examples to show that in negative sentences, *pianpian* always appears before negative adverbs 不 *bu* ‘not’ and 沒有 *meiyou* ‘not’. Reversed order is not grammatical: *沒偏偏學過游泳 ‘*haven’t pianpian learned how to swim’ and *不偏偏同意 ‘*don’t pianpian agree’ are not acceptable.

(41)但可悲的是，掉下水的偏偏沒學過游泳。

dan kebei de shi, diaoxia shui de pianpian mei xueguo youyong.

‘But what is pathetic is that those who have fallen into the water
pianpian have never learned how to swim.’

(42)可剛的父母偏偏不同意。

kegang de fumu pianpian bu tongyi.

‘Kegang’s parents pianpin don’t agree.’

2) *Pianpian* occurs before event modals

(43)而當我們無端擔心害怕它時，它卻偏偏會找上門來。

er dang women wuduan danxin haipa ta shi, ta que pianpian hui
zhaoshang men lai.

‘When we are worried too much, it pianpian will come to us.’

(44)「天上掉餡餅」的事情少之又少。不過對於在德國高校求學的大學生而言，就偏偏能碰上這樣的好事——因為那裡不收學費。

tianshang diao xianbing de shiqing shaozhiyoushao. buguo duiyu zai
Deguo gaoxiao qiuxue de daxuesheng eryan, jiu pianpian neng
pengshang zheyangde haoshi – yinwei nali bushou xuefei.

‘It is quite rare to have free lunches. But for German college students,
it pianpian happens as no tuition fee is charged.’

In the above two sentences, the subjective adverb *pianpian* positions before event modals 會 *hui* ‘would’ and 能 *neng* ‘could’. If we change the relative order into 會偏偏找上門來 ‘would *pianpian* come to us’ and 能偏偏碰上這樣的好事 ‘could *pianpian* have free lunches’, then these two sentences become ungrammatical.

However, *pianpian* can occur before proposition modals. For example, in (45), proposition modal 可能 *keneng* ‘possibly’ appears before *pianpian*.

(45)其實，這種頑固性偏頭痛可能偏偏與牙科疾病有關。

qishi, zhezhong wanguxing pianhoutong keneng pianpian yu yake
jibing youguan.

‘In fact, this kind of refractory headache is possibly *pianpian* related
to dental problems.’

3) *Pianpian* occurs before degree adverbs

(46)可是，他現在 28 歲，正是成家立業最需要錢的時候，而此時
偏偏最沒有現金，還負債！

keshi, ta xianzai 28 sui, zheng shi chengjialiyue zui xuyao qian de
shihou, er cishi pianpian zui meiyou xianjin, hai fuzhai.

‘But, he is 28 years old now. Around this age, people usually need
money to get married and develop their career. He *pianpian* is very
poor. In fact, he is in debt!’

(47) 當天卻偏偏有些多雲，我不免有些擔心。

dangtian pianpian youxie duoyun, wo bumian youxie danxin.

‘It was pianpian a bit cloudy that day. I was quite worried.’

In (46) and (47), subjective adverb *pianpian* occurs before 最 *zui* ‘most’ and 有些 *youxie* ‘to some degree’. But when it appears after them, we find the two expressions *最偏偏沒有現金 ‘*pianpian is quite poor’ and *有些偏偏多雲 ‘*it is pianpian a bit cloudy’ become unacceptable.

3.4. *Pianpian* as an exclusive focus particle

Xiandai Hanyu Xuci Lishi lists 只有 *zhiyou*, 僅僅 *jinjin* ‘only, just’ as a sense for *pianpian*, however it cannot be replaced by 只有 *zhiyou*, 僅僅 *jinjin* ‘only, just’ in any context. But, this does suggest the exclusiveness of *pianpian* since 只有 *zhiyou*, 僅僅 *jinjin* ‘only, just’ are exclusive focus particles. Exclusiveness of *pianpian* means that it excludes (or negates) the alternative proposition of the focus proposition *pianpian* occurs in. For instance, if someone says, 班裡很多同學一起考研究生，偏偏小李考上了 ‘A large number of students in our class have participated in the graduate school entrance examination, pianpian Xiaoli passed the exam’, we know that other students didn’t pass the exam except Xiaoli, i.e. the proposition that other students passed the exam is false. However, if the speaker has not used *pianpian* in the utterance, and only says, 班裡很多同學一起考研究生，小

李考上了 ‘A large number of students in our class have participated in the graduate school entrance examination, Xiaoli passed the exam’, then as hearers we are not sure whether other classmates have succeeded in the exam or not. This simple test shows the exclusiveness of *pianpian*.

In the following part, I further discuss alternative propositions which are related to the *pianpian* clause based on corpus data. I mainly discuss about two points:

- a) whether the alternative proposition of the *pianpian* clause is observed directly or inferred from context;
- b) how to judge whether *pianpian* has excluded the alternative proposition or not.

3.4.1. Focus proposition and alternative proposition of *pianpian* clause

As I have mentioned above, *pianpian* does not change the truth value of the sentence it appears in, for instance, the sentence 老天偏偏下起了雪 ‘It *pianpian* has started to snow’ in (48) maintains true if *pianpian* is deleted. However, this does not mean that *pianpian* provides no information on the truth-conditional level at all. In fact, *Pianpian* commits to the truth-value of the focus proposition and at the same time judges the alternative proposition as false, i. e. *pianpian* requires or restricts a possible world *w* where focus proposition is true and alternative proposition is false. So, strictly speaking,

pianpian does contribute some information from the truth-conditional content's perspective. In the utterance 老天偏偏下起了雪 'It *pianpian* has started to snow', *pianpian* commits to the truth of focus proposition 老天下起了雪 'It has started to snow' and judges the implicit alternative proposition 不會下雪 'It wouldn't snow' as false, i.e. it excludes an implicit contradictory proposition: 不會下雪 'It wouldn't snow'. The alternative proposition is obtained through the cue of contradictory marker 可 *ke* 'however' and the context information that it is time to go to work, therefore, the speaker does not wish it snow at this moment. This implicit proposition can be made explicit in the context:

(48) 眼看該上班了, (我希望不會下雪), 可, 老天偏偏下起了雪。

yankan gai shangbanle, (wo xiwang buhui xiaxue), ke, laotian
pianpian xiaqi le xue.

'It is almost time to go to work, (I wish it wouldn't snow), however,
it *pianpian* has started to snow.'

Pianpian informs us that the focus proposition 老天下雪了 'It has started to snow' is true, and the alternative proposition 不會下雪 'It wouldn't snow' is false. The contradiction between the two propositions is further marked by the contradictory maker 可 *ke* 'however'. The predicate 下起了雪 'has started to snow' is the focus of *pianpian* sentence. This type of focus is the most frequent one among all the possible focus types in *pianpian* sentence.

Alternative propositions can also explicitly occur in the discourse, for example,

(49) 本來，它應該在 14 年前就名震全國的，可偏偏命運多舛，使它成了我國石化行業里經歷最坎坷的企業。

benlai, ta yinggai zai 14 nian qian jiu mingzhenquanguode, ke pianpian mingyunduochuan, shi ta chengle woguo shihua hangye li jingli zui kanke de qieye.

‘It could have become successful nation-wide 14 years ago, however, the process of its development is full of ups and downs and it became the most luckless enterprise in the petrochemical industry.’

它命途多舛 ‘The process of its development is full of setbacks’ is the focus proposition of (49), which is contradictory to the explicit alternative proposition 它名震全國 ‘It became successful nation-wide’ in the preceding context. Focus proposition is true and alternative proposition is false, i.e. alternative proposition is excluded.

Among the 432 sample sentences of *pianpian*, 204 examples (47.22%) have explicit alternative proposition in the discourse; 107 examples (24.77%) contain negated components or contradiction triggering expressions in the focus propositions from which we can infer alternatives propositions; and the left 121 examples (28.00%) require contextual information to infer alternative

propositions. That is, about half of the data involve explicit alternative propositions and the rest either require information from focus propositions or context to infer alternative propositions.

3.4.2. Exclusiveness of *pianpian*

Pianpian can exclude explicit alternative propositions. In the 204 *pianpian* sentences where alternative proposition appears in the context, 94 items (48.04%) at the same time explicitly mark the contradiction between the focus proposition and the alternative proposition. For instance,

(50) 印尼隊賽前被看成熱門隊，可偏偏成為了馬來西亞隊的手下敗將。

yinnidui saiqian bei kancheng remen dui, ke pianpian chengwei le
Malaixiya de shouxiabaijiang.

‘Indonesian national team was expected to win before the game, but
it *pianpian* has lost to Malaysian national team.’

In this example, the focus proposition *pianpian* appears in – 印尼隊成了馬來西亞隊的手下敗將 ‘Indonesian national team has lost to Malaysian national team’ has an explicit alternative proposition in the preceding context – 印尼隊會贏 ‘Indonesian national team would win’. The focus 成為手下敗將 ‘has lost’ and the alternative 會贏 ‘would win’ form a contradictory relation. It is true that Indonesian national team has lost to Malaysian national

team while it is false that Indonesian national team would win, i.e. the proposition 印尼隊會贏 ‘Indonesian national team would win’ is excluded.

(51) 有些你以為一輩子都不會碰見的人，偏偏就在你眼前這樣走過。

youxie ni yiwei yibeizi dou buhui pengjian de ren, pianpian jiu zai ni
yanqian zheyang zouguo.

‘You’ve never thought you will meet these people again. Pianpian
they just pass by you in front of your eyes.’

Focus proposition of this example is 他們在你眼前走過 ‘They just pass by you in front of your eyes’, and in preceding context, we find its alternative proposition - 你永遠不會碰見他們 ‘you would never meet them’. The focus 從你眼前走過 ‘passing by you’ and the alternative 一輩子都不會碰見 ‘never meeting them’ are contradictory. It is true that they have passed by you and it is false that you would never meet them, which means that alternative proposition is excluded.

Pianpian also excludes implicit alternative propositions. The implicit alternative propositions are inferred from focus propositions of *pianpian* sentences or context.

When focus propositions include contradiction triggering expressions like negative components, degree components, components related to the

meaning of deficiency, or natural exclusiveness of some propositions, corresponding alternative propositions can be inferred.

1) Contradiction triggered by negative components in focus propositions

(52) 青州下面有六個郡，五個郡都有黨人，怎麼平原偏偏會沒有？

qingzhou xiamian you liu ge jun, wu ge jun dou you dangren, zenmo

Pingyuan pianpian hui meiyou?

‘There are communists in five out of six counties in Qingzhou. How come pianpian there are no communists in Pingyuan?’

In the above example, the focus proposition *pianpian* occurs in involves a negative component 沒有 ‘does not have’, which triggers a contradictory item 有 ‘have’. And it forms an implicit alternative proposition 平原有黨人 ‘There are communists in Pingyuan’. The focus proposition is true, and the alternative proposition is false, i.e. alternative proposition is excluded. In addition, the implicit proposition can be inserted into the discourse:

(53) 五個郡都有黨人，（平原也應該有黨人，）怎麼平原偏偏會沒有？

wu ge jun dou you dangren, (Pingyuan ye yinggai you dangren,)

zenmo pingyuan pianpian hui meiyou?

‘There are communists in five out of six counties in Qingzhou (Communists are also supposed to be in Pingyuan). How come pianpian there are no communists in Pingyuan?’

The interpretation remains the same with the only difference being the implicit alternative proposition becoming explicit.

2) Contradiction triggered by degree components in focus propositions

(54)因為我是南方人，所以原來一直怕冷。不巧的是，導演偏偏選的是北京最冷的時候來拍這部《西楚霸王》，因此吃了不少苦。

yinwei wo shi nanfang ren, suoyou yuanlai yizhi paleng. Buqiao de shi, daoyan pianpian xuan de shi Beijing zui leng de shihou lai pai zhe bu Xichubawang, yinci chile bushao ku.

‘Since I am from the south part of China, I am quite afraid of the winter chill. But unfortunately, the director pianpian chose to shoot the movie The Great Conqueror's Concubine during the coldest period in Beijing. At that time, I suffered a lot.’

In the focus proposition of this example, we find degree component 最冷 ‘the coldest’. It triggers contradictory items 不冷, 有點, 暖和 ‘not so cold, a little bit cold, warm’ etc. And the focus proposition forms implicit alternative propositions 導演選了不太冷的時候來拍這部電影 ‘The director chose to shoot the movie when it is not so cold’, 導演選了有點冷

的時候來拍這部電影 ‘The director chose to shoot the movie when it is a bit cold’, or 導演選了暖和的時候來拍這部電影 ‘The director chose to shoot the movie when it is warm’ etc. The focus proposition is true and alternative propositions are false. The alternative propositions are then excluded or negated.

3) Contradiction triggered by components of deficiency meaning in focus propositions

(55)真可惜，目前出現的某些自稱為中國畫創新之作，偏偏缺乏這種富於獨特個性的重要因素。

zhen kexi, muqian chuxian de mouxie zicheng wei zhongguohua
chuangxin zhi zuo, pianpian quefa zhezhong fuyu dute gexing de
zhongyao yinsu.

‘Unfortunately, those so-called creative Chinese paintings *pianpian* are short of the important character of being distinctive.’

In this example, the focus proposition *pianpian* occurs in involves a component 缺乏 ‘in short of’ which belongs to the semantic type of deficiency. 缺乏 ‘in short of’ would trigger a contradictory item 具有 ‘possess’ and accordingly the focus proposition would form the alternative proposition 有些中國畫創新之作具有這種富於獨特個性的重要因素 ‘Some of the creative Chinese paintings demonstrate this important character

of being distinctive’. The focus proposition is true, and the alternative proposition is false, i.e. the alternative proposition is excluded.

- 4) Contradiction triggered by the original exclusiveness of focus propositions

(56) 可偏偏此時，即吃過飯僅 3 小時，那張 86 元的賬單不見了。

ke pianpian cishi, ji chiguo fan jin 3 xiaoshi, na zhang 86 yuan de zhangdan bujian le.

‘But pianpian at this moment, only three hours after dinner, the ¥86 bill is gone.’

The focus proposition in this item is 此時賬單不見了 ‘The bill is gone at this moment’. The event 賬單不見了 ‘the bill is gone’ only happened at one time point - three hours after dinner. The alternative proposition is 賬單在其他時間點不見了 ‘The bill is gone at other moments’. A given event can only happen at a given time point but no other time points. This indicates that the focus proposition itself in this example is exclusive. Therefore, we can infer that the alternative proposition is excluded.

Pianpian can also exclude implicit alternative propositions inferred from context. Alternative proposition can also be inferred from context information other than obviously occurring in the discourse or being inferred from focus proposition. For example,

(57)眼看該上班了，可老天偏偏下起了雪。

yankan gai shangban le, ke laotian pianpian xiaqi le xue.

‘It is almost time to go to work, but it pianpian has started to snow.’

(58)常常有這樣的情況，好容易有一點空閒，她打算為丈夫和孩子做一頓可口的晚飯，盡一盡作為妻子和母親的義務，可這時候卻偏偏有人找上門來談案子。

changchang you zheyang de qingkuang, hao rongyi you yidian kongxian, ta dasuan wei zhangfu he haizi zuo yidun kekou de wanfan, jinyijin zuowei qizi he muqin de yiwu, ke zheshihou que pianpian you ren zhaoshang men lai tan an zi.

‘When she finally has some time to make dinner for her husband and child and do her duties as a wife and mother, often someone pianpian came to discuss about legal cases.’

In (57), we do not find any explicit alternative proposition in preceding and following context of *pianpian* sentences or components in the focus propositions that can infer alternatives which form alternative propositions. However, based on contextual information, at the time the speaker needs to go to work, he or she does not wish it snows as it would make it inconvenient for him or her on the way to the workplace. However, undesirable event 下起了雪 ‘It has started to snow’ has happened and accordingly the alternative

proposition 不會下雪 ‘It won’t snow’ is excluded. Similar situation is found in (58). Based on the discourse information in this example, at the days off, 有人找上門來談案子 ‘Someone came to discuss about legal cases’ is not what the speaker predicted or wished to happen. But the unexpected event has happened and the related alternative proposition 沒有人找上門來談案子 ‘No one came to discuss about legal cases’ is excluded. In both examples, alternative propositions are false and focus propositions are true, i.e. alternative propositions are excluded.

3.5. *Pianpian* as a scalar focus particle

3.5.1. The unexpectedness scale associated with *pianpian*

Corpus examples show that the focus proposition which *pianpian* appears in is more unexpected for the speaker than the alternative proposition. As discussed in Chapter 2 above, a focus proposition is the proposition associated with focus, and an alternative proposition is the proposition associated with alternative. The focus proposition and the alternative proposition can be compared on a scale¹⁵ of unexpectedness. The alternative proposition is what the speaker predicted, and the focus proposition disconfirms the speaker’s prediction, i.e. the speaker thinks it is not unexpected if the alternative

¹⁵ Scale is a set of degree values. This group of degree values is metric values of points or intervals about a specific property (for instance height, temperature, price etc.). And these degree values form a ranking relation (Kennedy 2001, Kennedy & McNally 2005).

proposition is true and it is unexpected that the focus proposition is true in reality. I present this contradiction as the following:

Scale of Unexpectedness: $P_F^{16} >^{17} P_{ALT}$

For instance, the sentence 他偏偏去北京了 ‘He *pianpian* went to Beijing’, different from the sentence 他去北京了 ‘He went to Beijing’, conveys that the speaker thinks the event that he went to Beijing is more unexpected than that he went to Shanghai for example.

In our data, 377 of 432 sentences (87.27%) explicitly show that the focus proposition is more unexpected compared with alternative proposition. The following are the types of markers for unexpectedness meaning of sentences in the corpus:

1) *Pianpian* sentences with explicit markers of unexpectedness

没（有）想到 *meixiangdao*, 谁曾想到 *meicengxiangdao*, 事出意外 *shichuyiwai*, 不料想 *buliaoxiang*, 竟（然） *jingran*, 居然 *juran*... ‘unexpectedly, surprisingly, out of one’s expectation’;

(59) 根本沒想到丁凡會動這個念頭，論資歷、論經驗，他差遠了，可他偏偏就[動了這個腦筋]F。

¹⁶ As mentioned in Chapter 2, F=Focus, ALT=Alternative; P_F =Focus proposition, P_{ALT} =Alternative proposition.

¹⁷ I use “proposition A > proposition B” to represent that proposition A is more unexpected or undesirable than proposition B.

genben meixiangdao Ding Fan hui dong zhegge niantou, lun zili, lun jingyan, ta cha yuan le, ke ta pianpian jiu dong le zhe ge naojin.

‘It is unexpected that Dingfan has thought about that, since his qualification and experience are far below the required standard. However, he pianpian has thought about that.’

Scale of Unexpectedness: P_F (丁凡動了這個腦筋 ‘Dingfan has thought about that’) > P_{ALT} (丁凡沒動這個腦筋 ‘Dingfan has not thought about that’)

(60) 可事出意外，偏偏車主來了[不少]F。

ke shichuyiwai, pianpian chezhu lai le bushao.

‘Out of their expectation, pianpian many of the car owners have come.’

Scale of Unexpectedness: P_F (車主來了不少 ‘Many of the car owners have come’) > P_{ALT} (車主來的不多 ‘Not many car owners come’)

2) *Pianpian* sentences with markers expressing prediction and contradiction:

按理说.....可是/但是..... *anlishuo*.....*keshi/danshi*.....; 本来应该.....可是/但是..... *benlai yinggai*.....*keshi/danshi*..... ‘it is supposed to..., however...’;

For this group of markers, the unexpectedness meaning comes from the contradiction of the event the speaker predicts (按理说 *anlishuo*, 本来应该 *benlai yinggai*..... ‘it is supposed to...’) and the event that actually happens.

(61) 產品打入東南亞、西歐市場, 按說該滿足了, 但他們卻偏偏「人心不足蛇吞象」]F。

chanpin daru dongnanya, xiou shichang, anshuo gai manzu le, dan tamen que pianpian renxin bu zu she tun xiang.

‘Their products have already entered markets in Southeast Asia and Western Europe. Normally, people would be satisfied. However, they are not satisfied with their success.’

Scale of Unexpectedness: P_F (他們「人心不足蛇吞象」 ‘They are not satisfied with their success’) > P_{ALT} (他們對他們的進展滿意 ‘They are satisfied with their success’)

(62) 本來, 它應該在 14 年前就名震全國的, 可偏偏「命運多舛」]F, 使它成了我國石化行業里經歷最坎坷的企業。

benlai, ta yinggai zai 14 nian qian jiu mingzhenquanguo de, ke pianpian mingyunduochuan, shi ta cheng le wo guo shihua hangye li jingli zui kanke de qiye.

‘It could have become successful nation-wide 14 years ago, however, the process of its development is full of ups and downs and it became the most luckless enterprise in the petrochemical industry.’

Scale of Unexpectedness: P_F (它命運多舛 ‘The process of its development is full of ups and downs’) > P_{ALT} (它名震全國 ‘It became successful nation-wide’)

3) *Pianpian* sentences with markers expressing contradiction

可是 *keshi*, 但是 *danshi*, 却 *que*..... ‘but, however’;

This category is different from the second category in lacking the explicit predicted event, however markers including 可是 *keshi*, 但是 *danshi*, 却 *que* ‘but, however’ etc. are cues showing contradiction of the current event with implicit predicted event.

(63) 南非的電話費可以在郵局交，但偏偏郵政業的效率令人[不敢恭維]F。

nanfei de dianhuafei keyi zai youju jiao, dan pianpian youzhengye de xiaolv ling ren bugangongwei.

‘People can pay their phone bills at post office in South Africa, but the efficiency of the postal service is not satisfactory.’

Scale of Unexpectedness: P_F (南非的郵政業效率令人不敢恭維

‘The efficiency of the postal service in South Africa is not

satisfactory’) > P_{ALT} (南非的郵政業效率使人滿意 ‘The efficiency of the postal service in South Africa is satisfactory’)

(64) 常常有這樣的情況，好容易有一點空間，她打算為丈夫和孩子做一頓可口的晚飯，盡一盡作為妻子和母親的義務，可這時候卻偏偏[有人找上門來談案子]F。

changchang you zheyang de qingkuang, hao rongyi you yidian kongxian, ta dasuan wei zhangfu he haizi zuo yidun kekou de wanfan, jinyijin zuowei qizi he muqin de yiwu, ke zheshihou que pianpian you ren zhaoshang men lai tan an zi.

‘When she finally has some time to make dinner for her husband and child and do her duties as a wife and mother, often someone pianpian came to discuss about legal cases.’

Scale of Unexpectedness: P_F (有人找上門來談案子 ‘Someone came to discuss about a legal case’) > P_F (沒有人找上門來談案子 ‘No one came to discuss about legal cases’)

4) *Pianpian* sentences with markers expressing difficulty to explain

令人不解的 *lingrenbujiede*, 令人費解的 *lingrenfeijiede*, 怪事 *guaishi* ‘it is difficult to explain that...’.

This category does not indicate the meaning of unexpectedness directly, however, as property of difficulty is entailed by the meaning of surprise¹⁸, I consider markers expressing meanings of difficulty as weak markers of unexpectedness.

(65) 更令人不解的是，不瞭解中國法律的原告，卻還偏偏要請同樣
[不懂中國法律、不懂中國語言的外國律師]F 來進行訴訟代理。

geng lingrenbujie de shi, bu liaojie Zhongguo falv de yuangao, que
hai pianpian yao qing tongyang bu dong Zhongguo falv, bu dong
Zhongguo yuyan de waiguo lvshi lai jinxing susong daily.

‘It is difficult to understand why the accusers who are not familiar
with Chinese laws pianpian engage lawyers who are also not familiar
with Chinese laws and Chinese language to conduct litigation.’

Scale of Unexpectedness: P_F (不瞭解中國法律的原告要請同樣不
懂中國法律、不懂中國語言的外國律師來進行訴訟代理 ‘The
accusers who are not familiar with Chinese laws engage lawyers who
are also not familiar with Chinese laws and Chinese language to
conduct litigation’) > P_{ALT} (不瞭解中國法律的原告請懂中國法律、
懂中國語言的律師來進行訴訟代理 ‘The accusers who are not

¹⁸ See footnote 19.

familiar with Chinese laws engage lawyers who are familiar with Chinese laws to conduct litigation’)

(66) 天下就有這樣的怪事，你越是想去排斥和壓抑它的東西，人們偏偏[要接近它、喜愛它] F。

tianxia jiu you zheyang de guaishi, ni yue shi xiang qu paichi he yayi ta de dongxi, renmen pianpian yao jiejin ta, xiai ta.

‘Though it is difficult to explain, people pianpian do try to access and like what they want to repel and suppress.’

Scale of Unexpectedness: P_F (人們接近、喜愛他們想排斥和壓抑的東西 ‘People try to access and like what they want to repel and suppress’) > P_{ALT} (人們避免、厭惡他們想排斥和壓抑的東西 ‘People try to avoid and hate what they want to repel and suppress’)

3.5.2. The undesirableness scale associated with *pianpian*

Besides the unexpectedness interpretation, I also noticed that in the sample data 236 examples (54.63%) show the meaning of undesirableness/negativity, i.e. *pianpian* tends to appear in negative events but it is not limited to be only used in negative events. I found three types of markers for negativity in the sample data:

1) Negative emotion words

太遺憾了 *taiyihanle* ‘regretful’, 不幸的 *buxingde* ‘unfortunate’, 可悲的 *kebeide* ‘pathetic’, 真可惜 *zhenkexi* ‘wasteful’, 倒霉的 *daomeide* ‘unlucky’;

(67)可電話里偏偏傳來一個[不幸的消息]F: 妻子在武漢難產。

ke dianhua li pianpian chuanlai yige buxing de xiaoxi: qizi zai wuhan nanchan.

‘But pianpian sad news was delivered through the phone that his wife was having a difficult labor in Wuhan.’

Scale of Undesirableness: P_F (傳來一個不幸的消息 ‘Sad news came’) > P_{ALT} (傳來一個好消息 ‘Good news came’)

(68)但可悲的是，掉下水的偏偏[沒學過游泳]F。

dan kebei de shi, diaoxia shui de pianpian mei xueguo youyong.

‘But what is unfortunate is that those who fell into the river pianpian have never learned how to swim.’

Scale of Undesirableness: P_F (掉下水的沒學過游泳 ‘Those who fell into the river have never learned how to swim’) > P_{ALT} (掉下水的學過游泳 ‘Those who fell into the river have learned how to swim’)

2) Entities loaded with negative emotion

悲劇 *beiju* ‘tragic’, 損失 *sunshi* ‘loss’, 危害 *weihai* ‘harm’, 麻煩 *mafan* ‘trouble’;

(69)防汛的重點在防，可我們偏偏就有那麼一些城市有河卻[不設防]F，如此城門大開的結果，當然是損失加損失。

fangxun de zhongdan zai fang, ke women pianpian jiu you namo
yixie chengshi you he que bu shefang, ruci chengmen da kai de
jieguo, dangran shi sunshi jia sunshi.

‘Preventing flood is more important than controlling flood, but
pianpian there are some cities which have rivers and never prevent
floods. It will certainly cause more loss.

Scale of Undesirableness: P_F (一些有河的城市不防汛 ‘Some
cities with rivers never prevent floods’) > P_{ALT} (有河的城市防汛
‘Cities with rivers prevent floods’)

(70)然而這一場完全可以避免的悲劇偏偏[發生了]F!

raner zhe yi chang wanquan ky bimian de beiju pianpian fasheng le.

‘However, this tragedy which was entirely avoidable pianpian has
happened.’

Scale of Undesirableness: P_F (悲劇發生了 ‘This tragedy has
happened’) > P_{ALT} (悲劇沒有發生 ‘This tragedy has not happened’)

3) Negative events

生病 *shengbing* ‘getting sick’, 出事 *chushi* ‘having an accident’, 失去機會 *shiqu jihui* ‘losing an opportunity’, 釀成这种结局 *niangcheng zhezhong jieju* ‘causing a bad consequence’

(71)而現在，偏偏在一次重大失敗後就[失去了再實踐的機會]F。

er xianzai, pianpian Zia yici zhongda shibai hou jiu shiqu le zai shijian de jihui.

‘But, now pianpian they have lost the chance to try again after this great failing.’

Scale of Undesirableness: P_F (他們失去了再次實踐的機會 ‘They have lost the chance to try again’) > P_{ALT} (他們擁有再次實踐的機會 ‘They have the chance to try again’)

(72)可事情偏偏[釀成了這種結局]F。

ke shiqing pianpian niangcheng le zhezhon jieju.

‘However, it pianpian has caused a bad outcome.’

Scale of Undesirableness: P_F (事情形成了這種後果 ‘It has caused a bad outcome’) > P_{ALT} (事情沒有形成這種後果 ‘It has not caused a bad outcome’)

3.5.3. Co-occurrence of unexpectedness and undesirableness in *pianpian* sentences

Most of the *pianpian* sentences from our corpus show both unexpectedness and undesirableness evaluations. This is consistent with the frequent co-occurrence of unexpectedness and unfortunateness in the studies of language and emotion (Gendolla & Koller 2001, Lin & Yao 2016).

Unexpectedness and undesirableness are two main factors for defining the emotion of surprise (see Gendolla & Koller 2001, Noordewier et al. 2016, Qiao et al. 2014, Reisenzein 2000 etc.)¹⁹. Surprise²⁰ is one of the basic human emotions, representing human's reaction to events (Ekman 1984, Izard & Malatesta 1987, Kryk-Kastovsky 1997, Peterson 2013).

I adopt the concept of surprise as including two different dimensions of meanings in different situations: a) the happening of some event disconfirms speaker's expectation/prediction b) the happening of some event is

¹⁹ Unexpectedness is also called expectation-disconfirmation, expectancy-disconfirmation ect., and undesirableness is also called negative valance, negativity or unfortunateness by different researchers (see Gendolla & Koller 2001, Noordewier et al. 2016, Qiao et al. 2014, Reisenzein 2000 etc.). Factors of new information, difficulty to explain and importance of the event etc. are possible entailed features of surprise which will not be discussed in this study.

²⁰ Concepts of mirative, mirativity, admirative, admirativity and meditative are grammatical forms reported to present the meaning of surprise, unexpectedness, new information etc. There are different views towards the definitions and relation among those concepts (See Aikhenvald 2012, DeLancey 1997, 2001, 2012, Hengeveld and Olbertz 2012, Hill 2012, Hyslop 2001, Zeevat 2013, Zeisler and De 2014 Peterson 2013 etc. for detailed analysis). In this study, I do not use the label of mirative or admirative or mirativity or admirativity, Instead I use surprise and unexpectedness as these terms are easier to understand and widely accepted.

undesirable to the speaker compared to the speaker's wish. The two meanings can exist at the same time or it is also possible that only one of them appears in a specific situation.

In this research, *pianpian* sentences are analyzed as expressing the meaning of surprise including meanings of unexpectedness and/or undesirableness. I classify *pianpian* sentences into three groups: first group with only unexpectedness interpretation, second group with only undesirableness interpretation and last group with both unexpectedness and undesirableness interpretations. Following are some examples of each group.

1) *Pianpian* sentences with only unexpectedness meaning

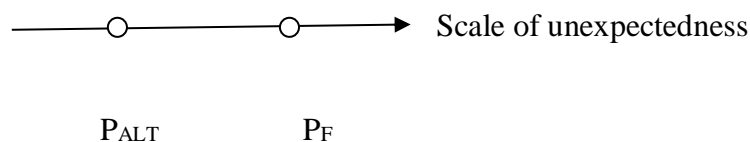
(73) 那麼多人參加比賽，偏偏[我]F 得了一等獎。

namo duo ren canjia bisai, pianpian wo de le yidengjiang.

‘So many people have participated in the competition, *pianpian* I got the first place.’

Pianpian indicates 我 *wo* ‘I’ as the focus. The focus 我 *wo* ‘I’ introduces other people who have participated in the competition other than me as the alternatives. *Pianpian* indicates the focus 我 *wo* ‘I’ as being at a more unexpected level and renders the alternatives ranking as candidates which are

less unexpected (i.e. more likely) to win the first prize on the same scale. This is a case showing only-unexpectedness-dimension scale²¹.



P_F = 我得了一等獎 ‘I won the first prize’

P_{ALT} = 其他參賽者得了一等獎 ‘other participants won the first prize’

(74)這些不起眼而又不容易做到的事，文明的張家港人偏偏[做好了]F。

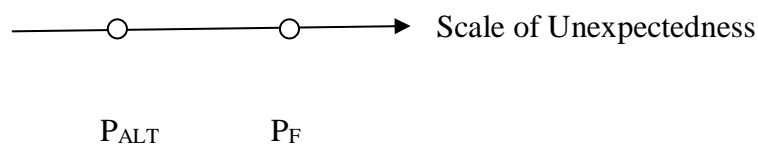
zhexie buqiyan er you bu rongyi zuodao de shi, wenming de
Zhangjiagang ren pianpian zuohao le.

‘These things are tedious and difficult to do well, but the civilized
citizens of Zhangjiagang pianpian did them well.’

Pianpian indicates 做好了 ‘did these things well’ as the focus of the clause it occurs in. The focus proposition 文明的張家港人做好了 ‘the civilized citizens of Zhangjiagang did these things well’ shows that the speaker’s attitude towards the current event is positive. On the other hand, the unexpectedness interpretation can be inferred: Based on the fact that these things are tedious and difficult, the speaker infers that people usually cannot

²¹ In this summary part I present the interpretations on real scales, which mean the same as the symbol “>” I used above. The symbol “>” is a simpler version to present scale related meanings. In this study, they are interchangeable.

do these things well. Then it follows the prediction that people from Zhangjiagang cannot do these things well. When the speaker finds the fact to be contradictory to what he or she predicts, he feels unexpectedness by the mismatch. This is also an example showing only-unexpectedness-interpretation, the focus proposition 文明的張家港人做好了 ‘The civilized citizens from Zhangjiagang did these things well’ ranks at higher level of degree of unexpectedness compared to the alternative proposition 文明的張家港人沒做好 ‘The civilized citizens from Zhangjiagang did not do these things well’ on the same scale. This scale is presented as following:



P_F = 文明的張家港人做好了 ‘The civilized citizens from Zhangjiagang did these things well’

P_{ALT} = 文明的張家港人沒做好 ‘The civilized citizens from Zhangjiagang did not do these things well’

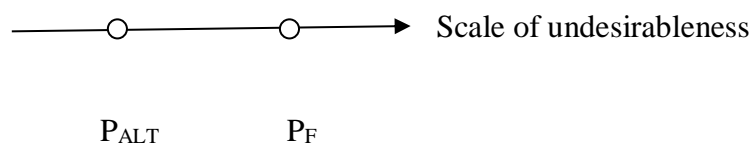
2) *Pianpian* sentences with only undesirableness meaning

(75)不早不晚，電腦偏偏[這時候]F壞了。

bu zao bu wan, diannaobao pianpian zheshihou huai le

‘Neither one minute earlier, nor one minute later, the computer pianpian broke now right at this (critical) moment.’

Pianpian in this example is associated with the focus 這時候 ‘this (critical) moment’. The focus 這時候 ‘this (critical) moment’ introduces its alternatives – other times points. The sentence asserts the fact that the computer broke now and also implies that it did not break at any other time points. And the scale *pianpian* induces in this sentence is only of undesirableness as the computer is equally likely to break at any time points, however the speaker finds it very unfortunate that the computer stopped working now than at other time points. The scale of undesirableness is shown as following:



P_F = 電腦這時候壞了 ‘The computer broke at this critical moment’

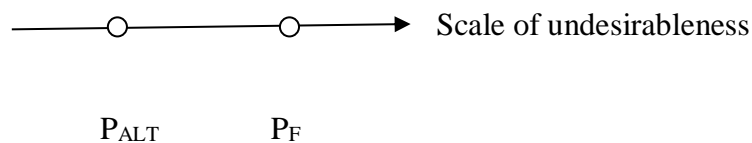
P_{ALT} = 電腦其他時候壞了 ‘The computer broke at other time points’

(76)陳奶奶小時候家裡窮，特別想讀書，但偏偏[讀不上]F。

chennainai xiaoshihou jiali qiong, tebie xiang du shu, dan pianpian
du bu shang.

‘Grandma Chen was raised in a poor family. She had a strong desire
to go to school, but her family pianpian cannot afford it.’

Pianpian indicates 读不上 ‘cannot afford school’ as the focus of the sentence. The focus introduces 读书 ‘can afford school’ as its corresponding alternative. The focus proposition 陳奶奶讀不上書 ‘Grandma Chen cannot afford school’ is true. And this could be logically inferred from the fact that her family was really poor, i.e. the focus event that her family cannot afford school conforms to the speaker’s prediction. However, this is not consistent with her wish or desire that she can afford to go to school. This is an example where only undesirableness interpretation is displayed. The scale of undesirableness in this case is presented as following:



P_{ALT} = 陳奶奶讀不上書 ‘Grandma Chen cannot afford school’

P_{ALT} = 陳奶奶讀得上書 ‘Grandma Chen can afford school’

3) *Pianpian* sentences with both unexpectedness and undesirableness meanings

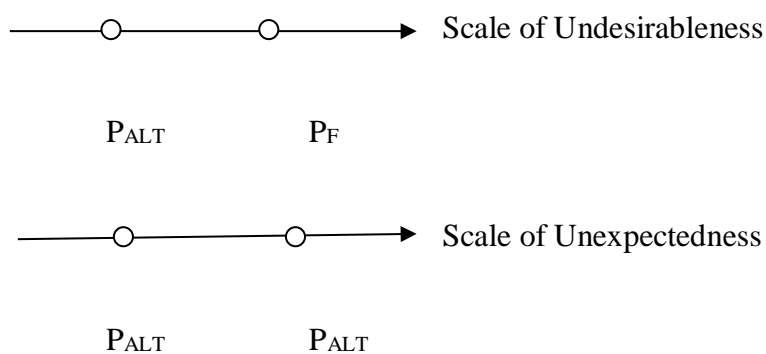
(77) 對他來說這麼重要的面試,他偏偏[搞砸了]F。

dui ta lai shuo zhemo zhongyao de mianshi, ta pianpian gao za le

‘This interview is so important for him, but he pianpian blew it.’

Sentence (77) exemplifies the situation where the focus being the predicate and the scalar reading being of both unexpectedness and undesirableness. To

be specific, 搞砸了 ‘blow the interview’ is the focus element and the related alternative is 沒有搞砸 ‘didn’t blow the interview’. Since this interview is very important for him. His supposed to prepare very well and pass the interview. However, the outcome is not what the imagined or wished. We can see that the speaker evaluates blowing a very important interview as unexpected and undesirable compared with passing it on separate scales. The two scales and how focus and alternative are comparatively located can be presented as following:



P_{ALT} = 他搞砸了面試 ‘He blew the interview’

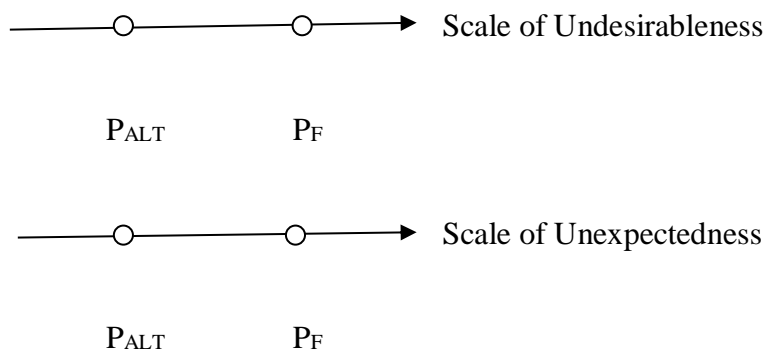
P_{ALT} = 他沒搞砸面試 ‘He has not blown the interview’

(78)算你們運氣，人家也當兵，一茬一茬的復員了，都沒有趕上打仗，偏偏讓[你們這一茬的]F趕上了。

suan nimen yunqi, renjia ye dangbing, yichayichade fuyuan le, dou meiyou ganshang dazhang, pianpian rang nimen zheyichade ganshang le

‘It is so unlucky of you. Lots of people have served in the army. Year after year, they have all been demobilized and have not encountered any war; but pianpian your session has encountered the war.’

你們這一茬的 ‘your session’ is the focus associated with *pianpian* in this case, which is contradictory to its alternative 人家 ‘other sessions of soldiers’. From the irony statement 算你們運氣 ‘it is lucky for you to encounter the war’, we can see that the speaker’s evaluation is negative towards the event that they encountered the war. Based on the context information that other sessions of soldiers have not encountered war year after year, the speaker predicts that the hearers would not encounter any war either. However, when the speaker finds out the contradictory fact, he expresses the unexpectedness feeling by using *pianpian*. This is an example showing both undesirableness and unexpectedness meaning of *pianpian* sentences. The following two scales present how the speaker evaluates focus compared with alternative through perspectives of undesirableness and unexpectedness.



P_F = 你們趕上了打仗 ‘Your session has encountered the war’

P_{ALT} = 人家沒趕上打仗 ‘Other sessions of soldiers have not encountered the war’

3.6. Summary

Based on the analysis above, *piapian* is a subjective adverb, which expresses the speaker’s evaluation towards propositions. It does not make contribution to the truth-conditional meaning of the original proposition. *Pianpian* shows several main properties: exclusiveness, meaning of unexpectedness and/or meaning of undesirableness. When speakers use *piapian*, they commit to the truth of the focus proposition, judge the alternative proposition as false, and evaluate that the focus proposition is more unexpected (and/or more undesirable) than the alternative proposition. This is the core meaning of *piapian*.

I summarize the features of *piapian* in the following table.

<i>Pianpian</i>	<i>SOA</i>	<i>Focus particle</i>	
	<i>Speaker-orientedness</i>	<i>Exclusiveness</i>	<i>Scalarity</i>
	+	+	+ scale of surprise (unexpectedness and/or undesirableness)

Table 1 Features of *piapian*

In the next chapter, I provide evidence from two behavioral experiments for the exclusiveness property of *piapian*.



Chapter 4

Based on corpus analysis from Chapter 3, we can see that only less than 50% of the *pianpian* sentences explicitly have exclusive marker. By contrast, more than 90% of the sentences have unexpectedness or undesirableness markers, which is consistent with the frequent co-occurrence of unexpectedness & unfortunateness in the studies of language and emotion (Gendolla & Koller 2001, Lin & Yao 2016). Therefore, exclusiveness of *pianpian* needs to be tested further with experiment study. Chapter 4 includes two experiments – section 4.1 is about the introduction of the experiments and section 4.2 and 4.3 are about the goals, participants, stimuli and procedures, results and discussions of the two experiments respectively.

4. Exclusiveness experiments of *pianpian*

4.1. Introduction

Based on how exclusive focus particles are defined (König 2002, Rooth 1985, 1992), to test the exclusiveness of *pianpian* we need to test whether focus proposition and alternative proposition(s) of *pianpian* sentences are true or not. If focus proposition is true and alternative propositions of *pianpian* sentence are false, then we say *pianpian* is an exclusive focus particle; however, if focus proposition and alternative propositions are all true, then we say *pianpian* is not an exclusive focus particle but an inclusive focus particle.

I follow Gotzner and Spalek (2016) in designing the experiments. Although their study is not specifically testing exclusiveness of focus particles, the paradigm they used are appropriate for the goals of Experiment 1 and 2. They focused on how different focus particles affect the retrieval of alternatives mentioned or unmentioned in the context by comparing exclusive focus particle *only*, inclusive focus particle *even* and zero marker. My goal is to see whether *pianpian* and related focus particles affect the truth-value of alternative propositions. The listing of exclusive focus particle, inclusive focus particle as different conditions would help to test whether *pianpian* behaves more like Mandarin exclusive focus particle 只 *zhi* ‘only’ (see Zhou 1991, Yin 2009, Xu 2010, Wang 2012 etc.) or inclusive focus particle 還 *hai* ‘also’ (see Lv 1980, Jiang & Jin 1997, Shen 2001, Zhang 2009, Wu 2009, Xu & Meng 2015 etc.) in judging the truth-values of focus propositions and alternative propositions.

4.2. Experiment 1

4.2.1. Goal

The goal of Experiment 1 is to see whether *pianpian* behaves more like Mandarin exclusive focus particle *zhi* or inclusive focus particle *hai* in judging the truth-values of focus propositions and alternative propositions through truth-value judgment task. The prediction for Experiment 1 is that

pianpian behaves like *zhi* and is differs from *hai* in judging the truth values of alternative propositions as false.

4.2.2. Participants

Forty-eight native speakers of Mandarin Chinese (31 female, mean age 28.52 years, age range 23 – 35) were recruited from Peking University, Northwest University etc. They are all paid to do the 20-minute-long experiment through internet as the questionnaire is designed using Sojump (问卷星 Wenjuanxing – a Chinese questionnaire designing and data collection website). The participants all reported that they grew up in Mainland China and have started to learn Mandarin Chinese at a very young age (mean age 4.44 years). 30 participants speak northern Chinese dialects other than Mandarin like Guanzhong dialect and Jiaodong dialect; 11 participants speak non-northern Chinese dialects like Cantonese and Wu dialect; and 7 participants only speak Mandarin. 10 participants can speak more than one dialect.

4.2.3. Stimuli and procedure

I have provided 4 lists of stimuli to the participants. Each list contains 20 testing items and 20 fillers. Testing item comprises a three-sentence conversation between two speakers A and B: sentence 1 introduces three specifically mentioned candidate NPs through speaker A's statement; sentence 2 represents speaker A's subjective guess about an event associated with two out of the three mentioned candidates; and sentences 3 expresses

speaker B's negative response (to sentence 2) which contains one of four conditions - 只(有) *zhi*²² 'only', 還(有) *hai* 'also', 偏偏 *pianpian* or zero marker. Participants read the conversation in written form silently with their normal reading speed and accordingly judge truth values of four propositions (a, b, c, d) – Proposition a: Proposition with focus (focus of sentence 3), Proposition b and c: Propositions with two mentioned alternatives (from sentence 2) separately or proposition d: Proposition with an unmentioned alternative. Participants respond by choosing one of three choices – True, False or Unknown with a click on the mouse. Participants themselves control how fast they answer the questionnaire, but they cannot go back to previous questions to change their judgment. Table 2 shows the example stimuli of Experiment 1.

<i>Condition</i>	<i>Example</i>
只(有) <i>zhi</i> 'only'	<p>A: 王軒、張明、劉博文都送了娜娜生日禮物。我猜王軒和張明喜歡娜娜。 B:不對，只有劉博文喜歡娜娜。 a.張明喜歡娜娜。 b.劉博文喜歡娜娜。 c.林彥華喜歡娜娜。 d.王軒喜歡安娜。</p> <p>(A: Wang Xuan, Zhang Ming and Liu Bowen all have bought birthday gifts for Nana. I bet Wang Xuan and Zhang Ming like Nana. B: That's not true, only Liu Bowen likes Nana. a.Zhang Ming likes Nana. b.Liu Bowen likes Nana. c.Lin Yanhua likes Nana. d.Wang Xuan likes Nana.)</p>

²² We assume that *zhi* and *zhiyou* (similarly *hai* and *haiyou*) only differ in their positions in the sentence.

<p>還(有) <i>hai</i> ‘also’</p>	<p>A: 王軒、張明、劉博文都送了娜娜生日禮物。我猜王軒和張明喜歡娜娜。 B:不對，還有劉博文喜歡娜娜。 a.張明喜歡娜娜。 b.劉博文喜歡娜娜。 c.林彥華喜歡娜娜。 d.王軒喜歡安娜。 (A: Wang Xuan, Zhang Ming and Liu Bowen all have bought birthday gifts for Nana. I bet Wang Xuan and Zhang Ming like Nana. B: That’s not true, Liu Bowen also likes Nana. a.Zhang Ming likes Nana. b.Liu Bowen likes Nana. c.Lin Yanhua likes Nana. d.Wang Xuan likes Nana.)</p>
<p>偏偏 <i>pianpian</i></p>	<p>A: 王軒、張明、劉博文都送了娜娜生日禮物。我猜王軒和張明喜歡娜娜。 B:不對，偏偏劉博文喜歡娜娜。 a.張明喜歡娜娜。 b.劉博文喜歡娜娜。 c.林彥華喜歡娜娜。 d.王軒喜歡安娜。 (A: Wang Xuan, Zhang Ming and Liu Bowen all have bought birthday gifts for Nana. I bet Wang Xuan and Zhang Ming like Nana. B: That’s not true, pianpian Liu Bowen likes Nana. a.Zhang Ming likes Nana. b.Liu Bowen likes Nana. c.Lin Yanhua likes Nana. d.Wang Xuan likes Nana.)</p>
<p>no marker</p>	<p>A: 王軒、張明、劉博文都送了娜娜生日禮物。我猜王軒和張明喜歡娜娜。 B:不對，劉博文喜歡娜娜。 a.張明喜歡娜娜。 b.劉博文喜歡娜娜。 c.林彥華喜歡娜娜。 d.王軒喜歡安娜。 (A: Wang Xuan, Zhang Ming and Liu Bowen all have bought birthday gifts for Nana. I bet Wang Xuan and Zhang Ming like Nana. B: That’s not true, Liu Bowen likes Nana. a.Zhang Ming likes Nana. b.Liu Bowen likes Nana.)</p>

	c.Lin Yanhua likes Nana. d.Wang Xuan likes Nana.)
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Table 2 Example stimuli of Experiment 1

4.2.4. Results

For the default focus propositions, participants choose True in more than 94% of the data points under all four conditions.

As Figure 3 shows, for the specifically mentioned alternatives, *hai* behaves significantly different from zero marker, *pianpian* and *zhi* in that participants tend to choose True under the condition of *hai* (90% data points) while they prefer to choose False under the conditions of zero marker, *pianpian* and *zhi* (87%, 90% and 92% separately). On the other hand, zero marker, *pianpian* and *zhi* behave slightly different in that more people chose Unknown under zero marker condition (12%) than under *pianpian* (8%) and *zhi* (7%) conditions.

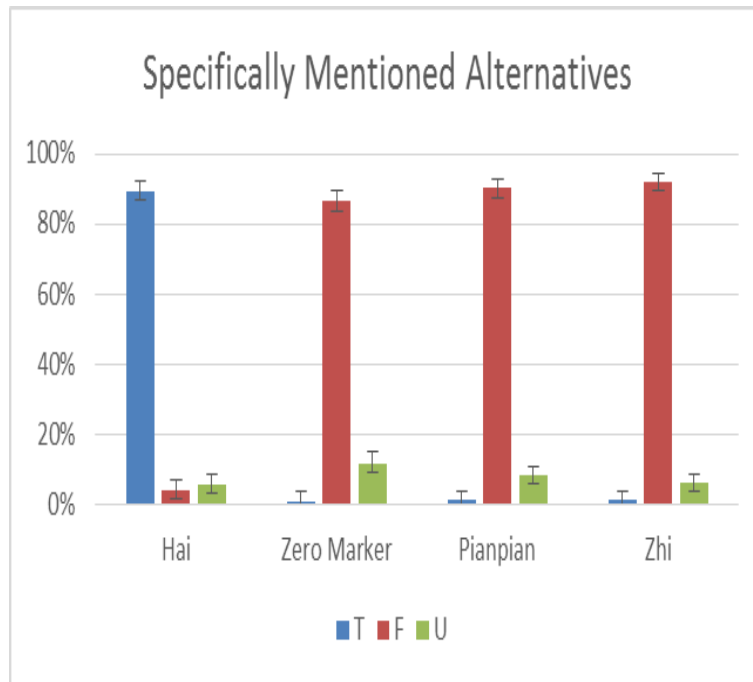


Figure 3 Specifically mentioned alternatives (Experiment 1)

As we can see from Figure 4, for not mentioned alternatives, the four markers do not show significant difference. However, *zhi* does display a different trend from other markers: participants more frequently chose False (53%) than Unknown (47%) for the condition of *zhi* while they tend to choose Unknown (*hai*: 55%, zero marker: 55%, *pianpian*: 55%) over False (*hai*: 44%, zero marker: 45%, *pianpian*: 43%) for the other three conditions.

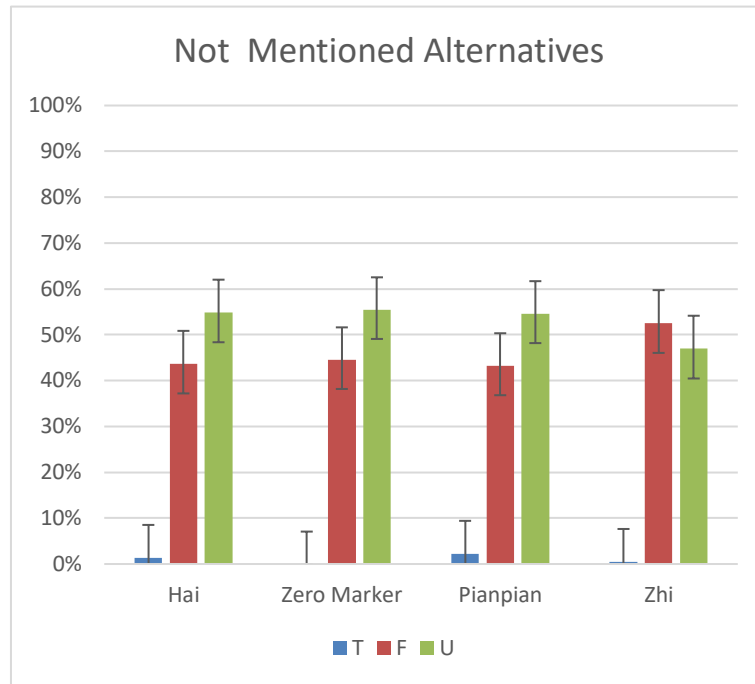


Figure 4 Not mentioned alternatives (Experiment 1)

Chi-square tests showed no effect of variables we considered - gender, focus being human or non-human and focus appearing in the subject or object position.

4.2.5. Discussion

Focus propositions cannot help distinguishing exclusive focus particles and inclusive focus particles since they are true under both conditions by definition. The observation in Experiment 1 confirms to this.

Specifically mentioned alternatives can differ exclusive and inclusive focus particles as Figure 3 displays that *hai* is significantly different from zero marker, *pianpian* and *zhi*. The fact that subjects chose True for specifically mentioned alternatives under the condition of *hai* shows that *hai* is an

inclusive focus particle. And the fact that subjects chose False for specifically mentioned alternatives under the condition of *zero marker*, *pianpian* and *zhi* shows that these markers are exclusive.

From the situations of not mentioned alternatives (Figure 4), we can see that participants chose False or Unknown under the condition of *hai*, which is an un-predicted phenomenon for an inclusive particle. The explanation is probably that inclusive particles normally only include context-related alternatives. Discourse plays an important role in determining the alternatives. *Zero marker*, *pianpian* and *zhi* exclude specifically mentioned alternatives, however this does not mean zero marker is an exclusive marker. Because of the design of the negative response marked by 不對 ‘That’s not true’, zero marker seems to have the exclusiveness feature while it is actually the specific environment and the plain sentence together have excluded the alternatives. The situations are different for *pianpian* and *zhi* as their exclusiveness property is compatible with the negative response.

Not mentioned alternatives do not distinguish inclusive focus particles from exclusive focus particles. However, we still see some degree of difference between *zhi* and the other three markers – participants were more confident and determined in judging the truth values of the non-mentioned alternative propositions under the condition of *zhi* (more participants chose False over Unknown) compared to under other conditions (more participants chose

Unknown over False). In this experiment, because of the effect of the negative response hint, we do not quite see the difference between *pianpian* and zero marker in other situations. I then compare *pianpian* and zero marker in normal context (i.e. sentences with *pianpian* and sentences without *pianpian*) to show the exclusiveness of *pianpian* in Experiment 2.

4.3. Experiment 2

4.3.1. Goal

The goal of Experiment 2 is to further test the exclusiveness of *pianpian* by comparing sentences with *pianpian* and sentences without *pianpian* through truth value judgment task.

Experiment 1 shows the difference of *pianpian* and the inclusive focus particle *hai* and the similarity of *pianpian* and the exclusive focus particle *zhi*, but it does not show obvious difference between *pianpian* and the default condition - zero marker. I then design Experiment 2 to test the exclusiveness of *pianpian* by comparing to the default group - zero marker. As Experiment 1 suggests that it is possible to have different types of alternatives, in this experiment (Experiment 2), I compare specifically mentioned (listed) alternatives and not specifically mentioned alternatives (mentioned as a group/set) to see if these two levels of alternative distinctions affect the exclusiveness property of *pianpian*. I predict to see *pianpian* excludes alternative compared with zero marker condition and under the condition of

zero maker people will either think alternatives as potential substitutes of focus or they are not sure about which answer to choose.

4.3.2. Participants

I have recruited fifty-four native speakers of Mandarin Chinese (7 Male, mean age 23.93 years, age range 23 – 35) from Peking University, Northwest University etc. They are all paid to do the 15-minute-long experiment through internet since the questionnaire is designed on Sojump (問卷星 Wenjuanxing – a Chinese questionnaire designing and data collection website). The participants all reported that they grew up in Mainland China and have started to learn Mandarin Chinese at a very young age (mean age 5.94 years). 36 participants speak northern Chinese dialects other than Mandarin like Xinan dialect; 7 participants speak non-northern Chinese dialects like Cantonese and Southern Min; and 11 participants only speak Mandarin and do not speak any dialect. 7 participants can speak more than one dialect.

4.3.3. Stimuli and procedure

In Experiment 2, I used 2 lists of stimuli, each of which contains 24 testing items and 24 fillers. Testing item comprises a two-sentence discourse: Sentence 1 introduces a group of candidate NPs either by specifically listing its members or by generally mentioning them as a set with shared property among them; Sentence 2 describes a situation associated with one specific candidate from the list or a proper candidate from the set mentioned as a

whole; Sentence 2 contains one of two conditions – 偏偏 *pianpian* or zero marker. Participants read the conversation in written form silently with their normal reading speed and accordingly judge truth values of two propositions a and b. Proposition a: Proposition with focus (focus of sentence 2). Proposition b: Proposition with alternative (half with specifically listed alternatives and half with alternatives which are not specifically mentioned but are introduced generally as a set). Participants respond by choosing one of four choices – True, False, Possibly True or Possibly False and Unknown with a click on the mouse. The participants themselves control how fast they answer the questionnaire, but they cannot go back to previous questions to change their judgment. Table 3 shows the example stimuli of Experiment 2.

<i>Condition</i>	<i>Example</i>
<i>偏偏 pianpian</i>	Alternatives being specific: 水果盤裡有桃子、梨、蘋果， 小李偏偏吃了桃子。 a. 小李吃了桃子。 b. 小李吃了蘋果。 (There are peaches, pears and apples in the fruit tray. Xiaoli pianpian ate a peach. a. Xiaoli ate a peach. b. Xiaoli ate an apple.)
	Alternatives being un-specific: 盒子裡有不少文具， 小李偏偏拿走了鉛筆。 a. 除了鉛筆以外， 小李還拿走了別的文具。 b. 小李拿走了鉛筆。 (There a number of stationary in the pencil case. Xiaoli pianpian took away the pencil. a. Besides the pencil, Xiaoli also took away some other stationery. b. Xiaoli took away the pencil.)
<i>no marker</i>	Alternatives being specific: 水果盤裡有桃子、梨、蘋果， 小李吃了桃子。

	<p>a. 小李吃了桃子。 b. 小李吃了蘋果。 (There are peaches, pears and apples in the fruit tray. Xiaoli ate a peach. a. Xiaoli ate a peach. b. Xiaoli ate an apple.)</p>
	<p>Alternatives being un-specific: 盒子裡有不少文具， 小李拿走了鉛筆。 a. 除了鉛筆以外， 小李還拿走了別的文具。 b. 小李拿走了鉛筆。 (There a number of stationary in the pencil case. Xiaoli took away the pencil. a. Besides the pencil, Xiaoli also took away some other stationery. b. Xiaoli took away the pencil.)</p>

Table 3 Example stimuli of Experiment 2

4.3.4. Results

For the default focus propositions, participants choose True in more than 90% items under both conditions.

As Figure 5 shows, for the situations of specifically mentioned alternatives, *pianpian* behaves significantly different from zero marker in that people tend to judge the alternative proposition as False (75% of data points) under *pianpian* condition and as Possibly True or Possibly False under zero marker condition (52%). We can see that subjects are more determined to judge specifically mentioned alternative propositions as False under *pianpian* condition, but they tend to judge them as Possibly True or Possibly false under zero marker condition. Under *pianpian* condition, I observed that participants judge 10% of data points as being Possibly True or Possibly False, 12% as

Unknown and 2% as True; while under zero marker condition, they judge 16% of data points as False, 29% as Unknown and 3% as True. This shows that with *pianpian*, participants experience lower frequency of not being sure (i.e. being unknown) about the truth-value of specifically mentioned alternatives than under zero marker condition.

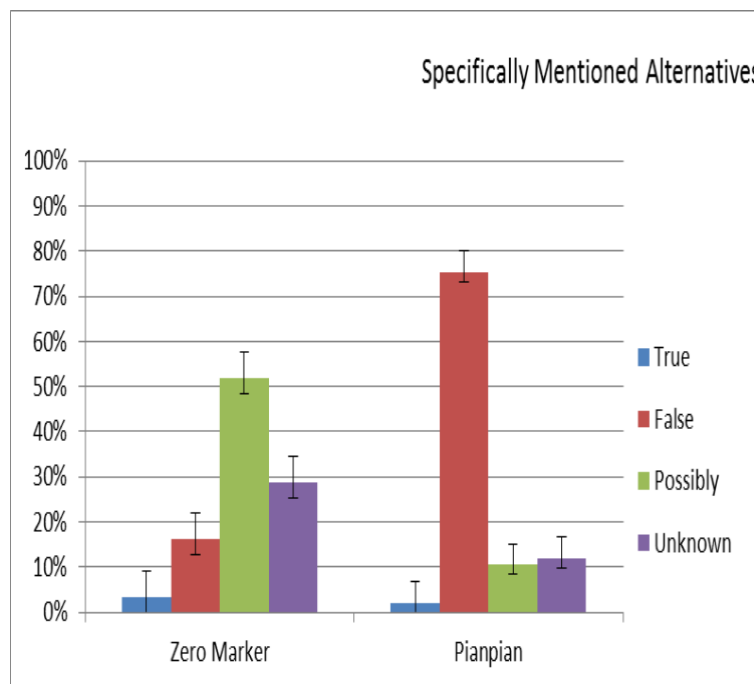


Figure 5 Specifically mentioned alternatives (Experiment 2)

For not specifically mentioned alternatives (see Figure 6), the pattern is the same as that of specifically mentioned alternatives. *Pianpian* again behaves significantly different from zero marker in that people tend to judge alternative proposition as False (67% of data points) under *pianpian* condition and as Possibly True or Possibly False under zero marker condition (60%). This shows that subjects are more determined to judge not specifically mentioned alternative propositions as False under *pianpian* condition, but

they tend to judge them as Possibly True or Possibly False under zero marker condition. Under *pianpian* condition, I observed that participants judge 21% of data points as being Possibly True or Possibly False, 8% as Unknown and 4% as True; while under zero marker condition, they judge 10% of data points as False, 25% as Unknown and 5% as True. This shows that participants experience higher frequency of being not sure (i.e. being unknown) about the truth values of alternative propositions under *pianpian* condition than under zero marker condition.

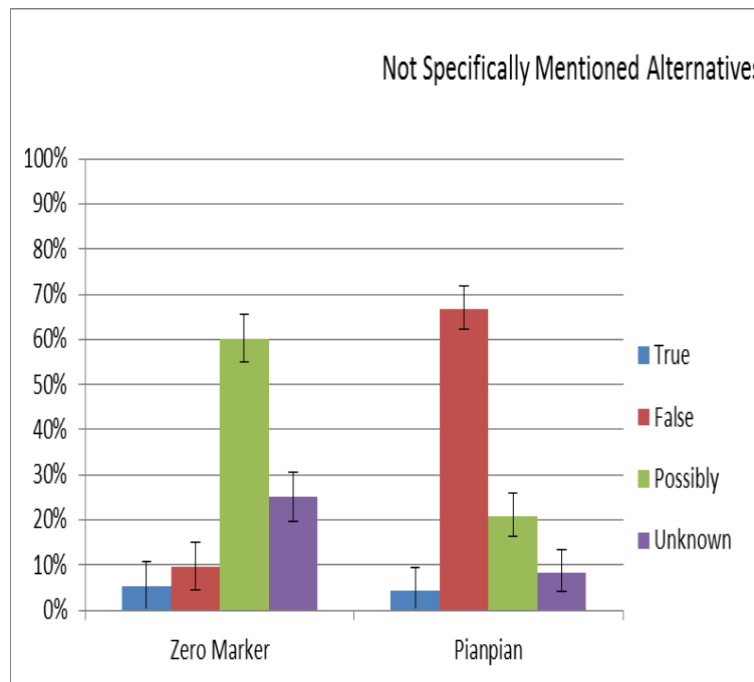


Figure 6 Not specifically mentioned alternatives (Experiment 2)

Chi-square tests in this experiment showed no effect of factors we considered – gender of participants, focus being human or non-human and focus appearing in the subject or object position.

4.3.5. Discussion

Unlike the slight difference we saw between *pianpian* and zero marker in special context in Experiment 1, significant difference is observed between these two conditions in plain context in Experiment 2. With *pianpian*, participants more frequently judge both specifically listed alternatives and generally mentioned alternatives as impossible substitutes of focus, while with zero marker, participants more frequently judge them as possible substitutes of focus or they are not sure whether they are potential substitutes of focus. Through this contrast, we notice the exclusiveness of *pianpian* displaying as judging both specifically mentioned and non-specifically-mentioned alternative propositions as false. This is consistent with our prediction.

4.4. Summary

Hai is an inclusive focus particle as shown by previous literature as well as in Experiment 1 where *hai* includes specifically mentioned alternatives. Our experiment also shows that it is not the case that *hai* includes every potential alternative. Context-relatedness is important in determining what alternative *hai* includes.

Zero marker is exclusive in certain context as negation words tend to exclude specifically mentioned alternatives.

Zhi is an exclusive focus particle as shown by previous literature as well as in Experiment 1 and Experiment 2.

Pianpian is an exclusive focus particle. It can exclude both specifically mentioned alternative and non-specifically mentioned alternatives.

In both experiments, it turned out that I have recruited more female subjects than male ones. This kind of un-balance may influence our result although I have not found any significant difference between genders through chi-square tests. Another possible factor to reconsider is participants' language background. The dialect backgrounds of the participants are not balanced either – a higher percentage of participants speak northern dialects, which may also have a role to play in affecting their response.

In Chapter 5, I will discuss the propositions related with *pianpian* sentence from the theoretical (semantic and pragmatic) perspective to determine how *pianpian* influence cross-propositional logic.

Chapter 5

5. Theoretical discussion: presupposition or implicature?

Evidence from corpus study in Chapter 3 shows that *pianpian* is an SOA and an exclusive and strictly scalar focus particle. And Chapter 4 provides experimental evidence for the exclusive focus particle function of *pianpian*. In summary, results of both the corpus study and the experiment study are consistent with the proposal of this dissertation that *pianpian* is an SOA and an exclusive and strictly scalar focus particle.

Being an SOA, *pianpian* expresses speaker's evaluation of unexpectedness and/or undesirableness. And *pianpian* can co-occur with other SOAs conveying compatible meanings. Compare sentence (79) where *pianpian* appears with sentence (80) where *pianpian* is dropped. We can see that, the *pianpian* sentence expresses that the speaker thinks that it is unexpected for him to get the first prize while the sentence without *pianpian* plainly states the fact that he got the first prize.

(79) 那麼多人參加比賽，偏偏我得了一等獎。

name duo ren canjia bisai, pianpian wo de le yi deng jiang

'So many people participated in the competition. Pianpian I got the first prize.'

(80) 那麼多人參加比賽，Ø 我得了一等獎。

name duo ren canjia bisai, wo de le yi deng jiang

‘So many people participated in the competition. I got the first prize.’

Pianpian can co-occur with other SOAs that also have the meaning of unexpectedness, such as *meixiangdao* 沒想到 ‘to one’s surprise’. However, this does not mean that *pianpian* and other SOAs express exactly the same meaning or that one of them is redundant. Different from other SOAs like *meixiangdao*, *pianpian* is not only an SOA but also a focus particle. A sentence with *pianpian* always has a focus in the scope of *pianpian* (i.e. to the right of *pianpian*). For example, in sentence (81) *pianpian* co-occurs with *meixiangdao*. While both *pianpian* and *meixiangdao* convey the meaning of unexpectedness, they differ in that *pianpian* indicates a contrastive focus in its scope and shows the features of exclusiveness and scalarity.

Sentence (81) is an example to show the exclusiveness of *pianpian*. In (81), Xiaoli is the focus. Focus proposition that Xiaoli has passed the graduate school entrance examination is true. Other students in the class are alternatives. The alternative proposition that other students have passed the graduate school entrance examination is false. Alternative proposition is excluded by *pianpian*.

(81)班裡很多同學一起考研，偏偏沒想到[小李]F 考上了。

banli henduo tongxue yiqi kaoyan, pianpian meixiangdao Xiaoli
kaoshang le

‘Many students in the class have taken the graduate school entrance examination, *pianpian* unexpectedly Xiaoli has passed.’

F = Xiaoli

Alt = other students in the class

P_F (小李考上了 ‘Xiaoli has passed the graduate school entrance examination’) is True

P_{ALT} (別的學生考上了 ‘Other students in the class have passed the graduate school entrance examination’) is False

If *pianpian* in sentence (81) is deleted, the exclusiveness reading is only implied but not assured. Compared to sentence (81). Sentence (82) only states that Xiaoli has passed the examination and does not state whether other students in the class have passed the examination or not.

(82)班裡很多同學一起考研，Ø沒想到小李考上了。

banli henduo tongxue yiqi kaoyan, meixiangdao Xiaoli kaoshang le

‘Many students in the class have taken the graduate school entrance examination, unexpectedly Xiaoli has passed.’

Sentence (83) shows that *pianpian* can appear linearly next to the focus. The focus 昨天 ‘yesterday’ appears right after *pianpian*. Sentence (84) is a case where *pianpian* does not appear next to the focus. However, the focus Beijing is still in the scope of *pianpian*.

(83)他今天不去，偏偏[昨天]F去北京了。

ta jintian buqu, pianpian zuotian qu Beijing le

‘He didn’t go today. Pianpian he went to Beijing yesterday.’

(84)他偏偏昨天去[北京]F了, 沒去上海。

ta pianpian zuotian qu Beijing le, mei qu Shanghai.

‘He pianpian went to Beijing yesterday. He didn’t go to Shanghai.’

The fact that *pianpian* sometimes indicates non-adjacent element as focus does not show that *pianpian* is not a focus particle as focus particle does not always appear next to the focus. For instance, focus particle only can induce different foci depending on the context. In sentence (85), chocolate is the focus. By contrast, in sentence (86), Sunday is the focus.

(85)John only eats [chocolate]F on Sunday. He doesn’t eat anything else.

(86)John only eats chocolate on [Sunday]F. He doesn’t eat it on any other days.

Pianpian can co-occur with other focus particles such as 只 *zhi* ‘only’ and 還 *hai* ‘also’. In example sentence (87), *pianpian* seems redundant since exclusive focus particle *zhi* appears in the sentence. However, *pianpian* and *zhi* have different scopes and therefore *pianpian* conveys additional meaning instead of being redundant. The scope of *pianpian* in (87) is 只去了北京 ‘only went to Beijing’, and the scope of *zhi* is 去了北京 ‘went to Beijing’. And in example sentence (88), co-occurrence of *pianpian* and *hai* seems contradictory since *pianpian* is an exclusive focus particle and *hai* is an

inclusive focus particle. However, similar to the situation in (87), *pianpian* and *hai* also have different scopes in (88). The scope of *pianpian* in (88) is 還去了北京 ‘also went to Beijing’. And the scope of *hai* is 去了北京 ‘went to Beijing’.

(87)他偏偏只去了北京。

ta pianpian zhi qu le Beijing

‘He pianpian only went to Beijing.’

(88)他偏偏還去了北京。

ta pianpian hai qu le Beijing

‘He pianpian also went to Beijing.’

Pianpian is not only an exclusive focus particle, it is a scalar focus particle as well. Sentences (89), (90) and (91) from Chapter 3 are repeated here to show the scalarity meaning of unexpectedness and undesirability *pianpian* conveys.

(89)這些不起眼而又不容易做到的事，文明的張家港人偏偏[做好了]F。

zhexie buqiyan er you bu rongyi zuo dao de shi, wenming de
Zhangjiagang ren pianpian zuo hao le

‘These things are tedious and difficult to do well, but the civilized
citizens of Zhangjiagang pianpian did them well.’

F = 做好了 ‘did well’

Alt = 沒做好 ‘didn’t do well’



P_{ALT} P_F

P_F = 張家港人做好了 ‘Citizens from Zhangjiagang did these things well’

P_{ALT} = 張家港人沒做好 ‘Citizens from Zhangjiagang did not do these things well’

(90) 陳奶奶小時候家裡窮，特別想讀書，但偏偏[讀不上]F。

chen nainai xiao shihou jia li qiong, tebie xiang dushu, dan pianpian du bu shang

‘Grandma Chen was raised in a poor family. She had a strong desire to go to school, but her family pianpian cannot afford it.’

F = 讀不上 ‘cannot afford school’

Alt = 讀得上書 ‘can afford school’



P_{ALT} P_F

P_F = 陳奶奶讀不上(書) ‘Grandma Chen cannot afford school’

P_{ALT} = 陳奶奶讀得上(書) ‘Grandma Chen can afford school’

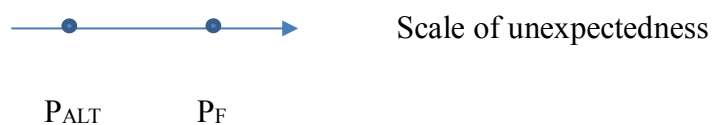
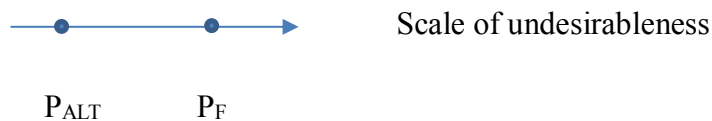
(91) 對他來說這麼重要的面試,他偏偏[搞砸了]F。

dui ta lai shuo zheme zhongyao de mianshi, ta pianpian gaozale.

‘This interview is so important for him, but he pianpian blew it.’

F = 搞砸了 ‘blow the interview’

Alt = 沒搞砸 ‘has not blown the interview’



P_F = 他搞砸了面試 ‘He blew the interview’

P_{ALT} = 他沒搞砸面試 ‘He has not blown the interview’

To sum up, *pianpian* indicates a focus in a sentence. The focus proposition of *pianpian* sentence is true while the alternative proposition of *pianpian* sentence is false. And *pianpian* conveys speaker’s evaluation that the focus proposition is more unexpected and/or undesirable than alternative proposition(s).

In the following sections, through theories of presupposition, assertion, entailment and implicature, I will discuss how *pianpian* sentence, its focus proposition, its alternative proposition and context information interact with each other. I also compare the behaviors of focus proposition and alternative proposition of *pianpian* sentences to these of two other focus particles *only* and *even*.

5.1. Presupposition²³

²³ For discussion of presupposition under the discourse representation theory (DRT), see van der Sandt 1992 and Geurts 1996, 1999 etc.

5.1.1. Semantic presupposition and pragmatic presupposition²⁴

Pragmatic presupposition is what speakers generally set as common ground in utterances. It is also called sentence presupposition, conversational presupposition or speaker presupposition (Stalnaker 1974, 1998, Karttunen 1974, Heim 1983 and Beaver & Geurts 2011)²⁵. For example, I assume that people who are reading this thesis now understand English (See Beaver & Geurts 2011 for similar example). This is a pragmatic presupposition.

Semantic presupposition is common ground meaning inferred from certain linguistic expressions (i.e. presupposition triggers, including definites²⁶, factive verbs etc.) (See Beaver & Geurts 2011 etc.). It is also called conventional presupposition. A classic semantic presupposition example is as follows: the utterance “The King of France is bald” presupposes that there is a King in France. Otherwise it is meaningless in making such an utterance since we cannot find such the entity in a possible world w we are talking about.

Following Strawson (1950/2013), a more practical version of the definition of semantic presupposition is: proposition q presupposes p if the truth of p is in condition for q to be true or false. This idea is developed from Frege (1892).

²⁴ Stalnaker (1974), Karttunen (1974), Heim (1983) also proposed for agent presupposition, which is similar to semantic presupposition under certain embeddings. I do not discuss agent presupposition in this study.

²⁵ Pragmatic presupposition is flexible in the way that speakers can presuppose what is not the common ground or take the common ground not as it is generally assumed (See Stalnaker 1994, 1998 and Beaver & Geurts 2011 etc.)

²⁶ For presupposition anaphora, see Kripke 2009 etc.

I will use this as the defining standard in determining semantic presuppositions in later sections. It can be illustrated by either one of the following two tables:

<i>p(presupposition)</i>	<i>q(proposition)</i>
T	T/F
F	²⁷

Table 4 Presupposition 1

<i>p(presupposition)</i>	<i>q(proposition)</i>
p	q/~q
~p	

Table 5 Presupposition 2

5.1.2. Projection property of presupposition

Projecting is an important property of presupposition. It is a phenomenon that presupposition projects through certain syntactic environments (maintains in certain contexts) and is blocked (does not maintain) in some other syntactic environments.

Morgan (1969) and Langendoen and Savin (1971) first proposed that presuppositions project under all embedding conditions. But Roberts et al.

²⁷ The blank part means that proposition does not exist in this situation, and it also works for the next table. C.f. Russell (1905) claimed that the truth-value of the proposition exists in such a condition. Strawson (1964) proposed topicality and word order affect whether the proposition exists in this kind of condition. In this study, we take a more consistent view that the position does not exist in the condition when the presupposition fails.

(2009) observed that one of the embedding conditions - factive verb like *regret* does not necessarily trigger conventional presupposition.

Projecting is not a unique or sole property of presupposition - conventional implicatures (both in the Gricean sense and in the sense of Potts) and prejacent of *only* also projects. Presupposition is backgrounded or not the main point of an utterance.

Heim (1990, 1992) and Roberts et al. (2009) discussed projecting property from the context update for the operators and constructions.

Karttunen (1973) classified embedding constructions into three types: presupposition holes, presupposition plugs and presupposition filters. Presupposition holes are syntactic environments where presuppositions always project through, which involve negation, possibility modal, conditional antecedent and interrogative. Presupposition plugs are syntactic environments which block projecting of presuppositions, which include non-factive attitude predicates and verbs of saying (In those cases, the presupposition leaks and becomes the commitment or belief of another agent). Presupposition filters are syntactic environments where presuppositions sometimes project and sometimes do not, which include consequent of conditional and disjunction.

Types of presupposition holes are presented as following:

a.Negation:

(92) The King of France is not bald.

This sentence presupposes that there is a King of France, which is also the presupposition of the positive version of the sentence (i.e. The King of France is bald). We say that the presupposition projects through negation or that negation is a presupposition hole.

b.Possibility modal:

(93) Perhaps the King of France is bald. (Beaver & Geurts 2011)

Under the possibility modal *perhaps* in this example, the presupposition that there is a king of France still exists like in the plain context (i.e. The King of France is bald). We say that possibility modal, including expressions like probably, perhaps, possibly etc., is one of presupposition holes or that presupposition projects through possibility modals.

c.Conditional antecedent

(94) If the king of France is bold, then some people will laugh at him.

When a sentence functions as the antecedent of a conditional, its presupposition projects through the conditional operator. Speakers still get the presupposition meaning that there is a King of France in the conditional antecedent. In (94), the presupposition that there is a King of France is not affected by the syntactic construction the sentence is embedded in – the

conditional.

d. Interrogative

(95) Is the King of France bald?

In interrogative environments, the presupposition also maintains. The part under question in interrogatives seems not related to the presupposition meaning at all. In (95), the presupposition that there is a King of France projects.

Types of presupposition plugs are presented as following:

a. Non-factive verb²⁸:

When sentences are embedded under non-factive verbs such as think, belief, wish etc., the presupposition is blocked, i.e. presupposition does not project through non-factive verbs. For instance,

(96) John believes that the King of France is bald.

In this example, the truth value of the proposition “there is a king of France” is unknown, unlike in the plain counterpart where we can be true that the speaker presupposes that there is a King of France. With the non-factive verb believe, the presupposition leaks and becomes the belief of the agent John, i.e. John believes that there is a King of France.

²⁸ See Zeevat 1992, Gazdar 1979, van der Sandt 1988, Geurts 1998 for different views.

b. Verb of saying:

Like non-factive verbs, verbs of saying including say, tell etc. are also presupposition plugs, i.e. verbs of saying also block presuppositions. For example,

(97) John told Mary that the King of France is bald.

In the plain sentence “The King of France is bald”, the speaker presupposes that there is a King of France. But in (97), the speaker does not presuppose that there is a King of France. With verb of saying *tell*, the presupposition leaks and becomes the commitment of the agent John – John believes that there is a King of France.

Types of presupposition filters are presented as following:

a. Consequent of conditional

Consequent of conditional is a syntactic environment where presupposition sometimes projects and sometimes does not. When the presupposition does not appear explicitly or cannot be entailed in any way in the antecedent of conditional, it projects in the consequent of conditional. Otherwise, presupposition is blocked. For example,

(98) If he always wears a hat, then the king of France is bald.

(99) If there is a king of France, then the king of France is bald.

In (98), there is no explicit or implicit information to interpret or infer that there is a King of France in the antecedent. In the consequent of conditional, the presupposition projects, i.e. the speaker presupposes that there is a King of France. But in (99), the proposition that there is a King of France explicitly appears in the antecedent of conditional, so it is impossible that the speaker presupposes it in the consequent of condition.

b. Disjunction

The situation of disjunction is similar to that of the consequent of conditional. When the “presupposition” (potential presupposition in Gazdar’s (1979) sense) appears explicitly as one proposition of the disjunction, the presupposition is blocked, otherwise, the presupposition projects. For instance,

(100) The King of France is bald or not.

(101) There is a King of France or the King of France is bald.

In (100), the presupposition does not appear explicitly in the disjunction construction, so it is not blocked (i.e. the presupposition that there is a King of France still maintains). But in (101), the presupposition appears explicitly as one of the propositions in the disjunction, so the presupposition does not project. The truth-value of the proposition there is a King of France is unknown.

Another test frequently mentioned in the literature is the “Wait a minute!” test. Even though Shannon (1976), von Stechow (2004) and Roberts (2006) etc. all agreed that the test of “Wait a minute!” is a unique indirect negation environment for presupposition, however, according to the research of Potts (2008), “Wait a minute!” is not a reliable test for presupposition as it can respond to various kinds of information. Potts retrieved 459 tokens of the expression “Wait a minute!” overall in a corpus and observed what the hearer’s objection is challenging. He found that only 129 tokens (28.10%) of “Wait a minute!” are responding to presupposition or implicature. It can also respond to appropriateness (38 tokens, 8.28%), at-issue content (122 tokens, 26.58%), discourse conditions (67 tokens, 14.60%) or unclear information (103 tokens, 22.44%). Following Potts (2008), I do not take “Wait a minute!” as a unique responding expression of presupposition.

5.1.3. Backgroundedness of presupposition

Presupposition is backgrounding information, i.e. it can explicitly occur in the context or can be put back into context. For example,

(102) The King of France is bald.

The presupposition of this sentence is that there is a King of France. And it can appear explicitly in the context: There is a King of France. He is bald.

The presupposition information requires the hearers to accommodate or to be

adjusted to (Karttunen 1974, Stalnaker 1974 and Lewis 1979). For instance,

(103) John read a book about Schubert and wrote to the author.

(Heim, 1983)

According to Beaver et al.'s (2009) analysis, in a broader understanding, the hearers need to accommodate that there is an author; and in a narrow understanding, the hearers only accommodate that there is an author and they have to infer that this is the same author who wrote that book read by John with context information. I think that the two readings are consistent with each other in that presupposition is also a kind of inference. My suggestion is that "there is an author" is semantic presupposition since anaphora presupposition trigger "the author" appears in the context; and that "this is the same author who wrote the book which is read by John" is pragmatic presupposition. For both semantic and pragmatic presuppositions, the hearers need context information to interpret.

5.2. Implicature²⁹

²⁹ One thing to pay attention to is that things like expansion and ellipsis are not implicature even though they are also implicit information. For instance,

I will be home later (tonight).

Fanny has finished (her homework). (Bach 2006)

Although these two kinds of phenomena also need some kind of inference, but it is different from the way we infer the implicature meaning (c.f. Bach 1999, 2006 for

5.2.1. Conversational and Conventional implicature³⁰

Implicature describes the phenomenon that the speaker suggests the truth of proposition Q through the truth of proposition P. Usually implicature can be divided into conversational implicature and conventional implicature (See Grice 1975, Karttunen 1975, Levinson 1983 and Horn 2006).

Conversational implicature is calculable based on Grice's cooperative principle (Grice 1967), uncertain, non-conventional, re-enforceable and cancelable (Grice 1975, 1989, Levinson 2000, Huang 2009 etc.). For example,

(104) It wasn't Rosemary who got the job.

Someone got the job.

(Beaver 1996)

“Someone got the job” is the conversationally implicature of the sentence “It wasn't Rosemary who got the job”. The conversational implicature meaning is non-conventional in that there is no specific semantic trigger to identify it. The hearer can calculate the conversational implicature meaning based on cooperative principle. “It wasn't Rosemary who got the job” is a negative response to utterances such as “Rosemary got the job”. The speaker probably

non-inferential view of implicature). These meanings are part of the truth-conditional meaning and can be easily inferred from context unlike implicature which is non-truth-conditional and may need semantic triggers in context.

³⁰ We do not discuss scalar implicature (like *some* can mean *not all*) in this study, see Hirschberg (1985), Chierchia (2004) etc. for reference.

knows who exactly got the job or at least knows that someone else got the job, otherwise s/he lacks evidence to say, “It wasn’t Rosemary who got the job”. The implicature meaning is re-enforceable in that the speaker can add sentences like “Someone else (or maybe a specific name like John) got the job” after saying “It wasn’t Rosemary who got the job”. However, it is uncertain whether the speaker knows someone else got the job as it is also possible that the speaker is only sure about the fact that Rosemary did not get the job but s/he does not know who actually got the job. We can cancel the conversational implicature “Someone got the job” by adding something like “actually no one got the job since the candidates are all unqualified” after the sentence “It wasn’t Rosemary who got the job”.

Conventional implicature³¹ describes the phenomenon where speakers implicate something with certain semantic triggers³². Conventional implicature is non-truth-conditional (c.f. Bach 1999, 2006), independent, semantic, secondary, non-calculable, new, non-cancellable, context-sensitive (Grice 1975, Horn 2006, Huang 2011 etc.). The following is an example of conventional implicature,

(105) George is a linguist but he’s smart. (Grice 1975)

³¹ Rieber (1997) claimed that it is not necessary to have conventional implicature.

³² Frege (1918/1994) mentioned that “still” in the sentence “Alfred has still not come” suggested that Alfred is expected to come.

The speaker thinks that linguists are usually not smart. Contrary to his understanding, George is smart though being a linguist.

The use of *but* does not contribute to the truth conditional meaning of the original sentence. In the plain situation “George is a linguist. He is smart.” and the *and* situation “George is a linguist. And he is smart”, both the two propositions “George is a linguist” and “He is smart” are true. With *but*, they are still both true. It means that the implicature meaning *but* brings is not truth-conditional. Replacing *but* with *and* also shows the detachability of conventional implicature since the contrary meaning will be gone in the *and* situation. The semantic trigger *but* suggests a contrary relation between the two propositions. The implicature meaning of contrary relation is independent of the truth-conditional meaning and secondary in nature. It is also new information, not background information - the speaker does not take it for granted that the hearer is also aware of this piece of information. Unlike conversational implicature, the conventional implicature meaning *but* triggers cannot be calculated with Grice’s cooperative principle: the implicature meaning associated with *but* is always a contrary relation between two propositions in the speaker’s perspective despite of the quality or quantity of the context information. Conventional meaning is also not cancellable: when speakers use the semantic trigger *but*, they always implicate that they think two propositions are in contrary relation. And when a speaker says, “George

is a linguist but he's smart", s/he cannot cancel the conventional meaning by adding something like "—don't get the wrong idea, though; I didn't mean anything about linguists not being smart" (Grice 1975). Otherwise s/he is just contradicting what s/he has just said. Conventional implicature is context-sensitive in that with different context information, *but* implicates contrary relation between different pairs of propositions. In a similar sentence like "George is a linguist, but he is stupid", the implicature meaning is different from the example sentence. In this situation, the speaker thinks that linguists are usually smart; however, he has found George as an exception in being a stupid linguist.

Literature also did research on some other triggers of conventional implicature: *too*, *either*, *also*, *only* (Karttunen & Peters 1979); *therefore* (Grice 1989), *even* (Karttunen & Peters 1979, Francescotti 1995, Horn 2006) and supplement (Potts 2005) etc.

5.2.2. Projection of implicature

Implicature projects through presupposition holes, filters and plugs (Potts 2002, 2005, Roberts et al. 2009 and Simons et al. 2010 etc.). For instance,

(106) Even Bill knows it's unethical.

Conventional implicature of *even*:

Bill is the least likely (of a contextually associated set of candidates) person to know it is unethical (Horn 2006).

a. Negation

(107) Even Bill doesn't know it's unethical.

Under the negation situation, the speaker uses *even* to implicate that Bill is the most likely person to know it's unethical. The implicature meaning projects through negation although it is slightly different from the implicature of sentence (106).

b. Possibility modal:

(108) It's possible that even Bill knows it's unethical.

Under possibility modal, the speaker still implicates that Bill is the least likely person in a given context to know it's unethical like in (106). The possibility modal is only used to show that the speaker is not sure whether Bill knows it's unethical. It does not influence the implicature meaning.

c. Antecedent of conditional:

(109) If even Bill knows it's unethical, then we don't have to ask
other people.

Under the antecedent of conditional, speakers still use *even* to implicate that Bill is the least likely person to know it's unethical. If the least possible person

knows about something, the speakers do not have to ask other people as they are more likely to know. The implicature meaning brought by *even* projects through the antecedent of conditional.

d. Interrogative:

(110) Even Bill knows it's unethical, doesn't he?

Under interrogative, the implicature meaning of *even* projects. What is under question is the truth-conditional content, i.e. the speaker does not know whether Bill knows it's unethical. But s/he is sure that Bill is the least likely person to know it's unethical.

e. Non-factive verbs

(111) John believes even Bill knows it's unethical.

With non-factive verbs, the speaker is not sure whether the complement event (here the event is that Bill knows it's unethical) is a fact or not. But s/he implicates that Bill is the least likely person to know it's unethical, i.e. implicature projects through non-factive verbs.

f. Verbs of saying

(112) John says even Bill knows it's unethical.

Like non-factive verbs, with verbs of saying, the speaker is not sure whether the complement event is a fact or not, but s/he uses *even* to implicate that Bill

is the least possible person to know it's unethical like in (106). Implicature maintains under verbs of saying.

g. Consequent of conditional

(113) If it is very easy to judge, then even Bill knows it's unethical.

When in the consequent of conditional, *even* is still used to implicate that the speaker evaluates Bill as the least likely person to know it's unethical. The speaker is not sure whether it is a fact that Bill knows it's unethical, but it does not affect the implicature meaning of *even* sentence. Implicature projects through consequent of conditional.

h. Disjunction

(114) Even Bill knows it's unethical or it is difficult to judge.

When *even* sentence is one of the propositions of disjunction, it still implicates that the speaker evaluates Bill as the least likely person to know it's unethical. The speaker does not know whether the proposition "Bill knows it's unethical" is true or the proposition "it is difficult to judge" is true, however this is not associated with the implicature meaning of *even* sentence. Implicature projects in disjunction.

5.3. Assertion and entailment

Two related pragmatic phenomena are assertion and entailment.

Assertion and entailment are also discussed in this chapter. Stalnaker (1978) claimed that assertion has the following properties: “First, assertions have content; an act of assertion is, among other things, the expression of a proposition – something that represents the world as being a certain way. Second, assertions are made in a context – a situation that includes a speaker with certain beliefs and intentions, and some people with their own beliefs and intentions to whom the assertion is addressed. Third, sometimes the content of the assertion is dependent on the context in which it is made, for example, on who is speaking or when the act of assertion takes place. Fourth, acts of assertion effect, and are intended to affect, the context, in particular the attitudes of the participants in the situation; how the assertion affects the context will depend on its content” (Stalnaker 1978: 147).

The definition of entailment is developed from first-order logic and is studied more and more in semantics and pragmatics. Entailment is also about the relation of two propositions. Specifically, p entails q when the truth of p requires the truth of q (See Beth 1955, Galliani 2013 etc. for reference). An example of entailment:

The proposition Zhang San is from Beijing entails the proposition Zhang San is from China.

Zhang San is from Beijing. \models Zhang San is from China.

However, when the proposition Zhang San is from Beijing is false, then the related proposition Zhang San is from China could be either true or false.

Entailment can be presented in the following two tables:

<i>p(Proposition)</i>	<i>q(Entailment)</i>
T	T
F	T/F

Table 6 Entailment 1

<i>p(Proposition)</i>	<i>q(Entailment)</i>
p	q
~p	q/~q

Table 7 Entailment 2

5.4. *Only*

5.4.1. *Only* is an exclusive and scalar focus particle

Only is an exclusive focus particle. The focus proposition of *only* sentence is true, and the alternative proposition is false (Horn 1969, 2004, Barwise & Cooper 1981, Horn 1989, Köning 1991/2002, Rooth 1992, van Rooy & Schulz 2005, Ippolito 2006, Coppock & Beaver 2013)³³. For instance:

(115) Only John ordered roasted duck.

This sentence has two levels of meanings:

- a. John ordered roasted duck.
- b. No one else ordered roasted duck.

³³ See Lerner and Zimmermann (1981) and Foolen (1983) for evaluation meaning of *only*.

“John ordered roasted duck” is the focus proposition and it is true. “Someone else ordered roasted duck” is the alternative proposition. And it is false since no one else in the specific set associated with the context ordered roasted duck. Sentence (115) is a case where the proposition has no scalar reading³⁴. However, in some context, *only* sentence expresses scalar meaning, for example:

(116) John only eats the most expensive roasted ducks.

a. John eats the most expensive roasted ducks.

b. John doesn't eat cheaper roasted ducks.

c. There is a scale of price of roasted ducks.

The focus proposition “John eats the most expensive roasted ducks” is true. And the alternative proposition “John eats cheaper roasted ducks” is false. And “the most expensive” in the context triggers a scale of price of roasted ducks. The focus is evaluated as on higher end of the scale. The scale meaning is not part of the meaning of *only*.

Context factors determine whether there is a scale or what kind of scale is expressed in *only* sentence and whether focus is evaluated as positioning in

³⁴ For non-scalar *only* sentences, focus seems to be the minority of the universe of all possible candidates and the alternative(s) seems to be the majority of the universe. For instance,
Only John ordered roasted duck.
?Only John, Mary and Susan ordered roasted duck (The second sentence seems not acceptable when in total four people are ordering food).

the lower part or higher part of the scale. And the possible scale is not necessarily associated with expectation. For instance,

(117) There's only one who is good, and that is God himself. (Web example)

In (117), the scale is not of the property of being good, but of the number people who are good.

Exclusiveness is not necessarily associated with scalarity. Exclusiveness is about not possessing an un-gradable property or not covering some degrees of a gradable property, while scalarity is different degrees of a gradable property. Exclusiveness is only potentially associated with scalarity when the property is gradable. For example,

(118) Only John came to the party.

In this sentence, the property is of going to the party or not going to the party, which is non-gradable. Here we can only get the meaning of exclusiveness and no scalarity meaning is presented. Specifically, the speaker uses *only* to exclude other people who do not possess the property of going to the party.

(119) Only John is a good person.

Here, the property is of being good, which is gradable. But still we can only interpret the meaning of exclusiveness but not scalarity. Although the property of being good provides a potential scale for *only* in the context, it is

not the focus the sentence. Therefore, *only* is used to exclude other people who do not possess the property of being good without scalarity reading.

(120) Only the best students can pass the exam.

In (120), the property is about how well students do with their study. Both the meaning of exclusiveness and scalarity are expressed. “The best students” is the focus the sentence and it triggers the scale of how well students do in their study. *Only* excludes the alternative “not so good students” who position on lower end of the scale.

5.4.2. Theoretical discussion of propositions associated with *only*

In this part, I test the projecting properties of the two levels of meanings of *only* sentences.

(121) John only ordered roasted duck.

P_F =John ordered roasted duck.

P_{ALT} = John ordered other dishes.

a. Negation

Focus proposition of *only* sentence projects trough negation (Coppock & Beaver 2013 etc.).

(122) John didn't only order roasted duck.

P_F maintains true under negation. And P_{ALT} becomes true under negation compared to the situation in (121). Therefore, we say that P_F projects through negation.

b. Possibility modal

(123) It is possible that John only ordered roasted duck.

When *only* sentence is embedded under possibility modal, P_F is true and P_{ALT} is possibly true or possibly false. P_F projects through possibility modal.

c. Antecedent of conditional

(124) If John only ordered roasted duck, Mary would be angry.

When *only* sentence acts as the antecedent of conditional, P_F is true and P_{ALT} is possibly true or possibly false. P_F projects through antecedent of conditional.

d. Interrogative

(125) Did John only order roasted duck?

When *only* sentence is embedded under interrogative, P_F is true and P_{ALT} is possibly true or possibly false. P_F projects through interrogative.

e. Non-factive attitude predicates

(126) John wishes that he only ordered roasted duck.

With non-factive attitude predicates, both P_F and P_{ALT} of *only* sentence are possibly true or possibly false. P_F is blocked under non-factive attitude predicates.

f. Verbs of saying

(127) Mary says John only ordered roasted duck.

With verbs of saying, both P_F and P_{ALT} of *only* sentence are also possibly true or possibly false. P_F is therefore blocked under verbs of saying.

g. Consequent of conditional

When *only* sentence acts as the consequent of conditional, there are two possible types of situations. When P_F is locally satisfied within antecedent of conditional, both P_F and P_{ALT} are possibly true or possibly false; however, when focus proposition cannot be inferred from antecedent of conditional, P_F of *only* sentence is true and P_{ALT} is possibly true or possibly false (Potts 2005):

(128) If John ordered roasted duck, then John only ordered roasted duck.

P_F is possibly true or possibly false. P_{ALT} is also possibly true or possibly false.

P_F is blocked in this case.

(129) If John likes roasted duck, then he only ordered roasted duck.

P_F is true and P_{ALT} is possibly true or possibly false. P_F projects in this case.

h. Disjunction

The situation of disjunction is similar to that of consequent of conditional, when *only* sentence acts as one of the propositions of disjunction, there are two possible situations. If P_F is locally satisfied within one of the propositions of disjunction, both P_F and P_{ALT} are possibly true or possibly false; however, when P_F cannot be inferred from one of propositions of disjunction, P_F of *only* sentence is true and P_{ALT} is possibly true or possibly false.

(130) John ordered roasted duck, or he only ordered roasted duck.

P_F is possibly true or possibly false. P_{ALT} is also possibly true or possibly false.

P_F is blocked in this case.

(131) John only ordered roasted duck, or he also ordered other dishes.

P_F is true. P_{ALT} is possibly true or possibly false. P_F projects in this case.

Based on these tests, we can see that the focus proposition of *only* sentence³⁵ behaves like presupposition, which projects through all presupposition holes (negation, possibility modal, antecedent of conditional and interrogative), gets blocked in presupposition plugs (non-factive attitude predicates and verbs of saying) and projects through certain presupposition filters (consequent of conditional and disjunction) (See Köning 1991/2002, Potts 2005, Roberts 2006, and Coppock & Beaver 2013 etc.). Alternative

³⁵ It's also called prejacent or the positive component in the literature.

proposition, which is false in plain context, is true in negation and possibly true or possibly false in all other testing contexts. It seems to be entailment (Köning 1991/2002, Zeevat 2009)³⁶. The truth of focus proposition requires the truth of denying of alternative proposition in *only* sentence. And the falseness of focus proposition does not require the alternative proposition to be either true or false. To be precise, negation of alternative proposition in *only* sentence is entailment of current proposition. *Only* sentence is not necessarily related to evaluation proposition, but when it does (For example in sentence “She is only 18”, the speaker evaluates age 18 as young as compared to older ones), the evaluation proposition projects through all testing environments.

Behaviors of focus proposition, alternative proposition and evaluation proposition of *only* sentence are summarized in

Table 8.

<i>Testing environments</i>	P_F	$\sim P_{ALT}$	(P_{EVL})
<i>Negation</i>	T	F	(T)
<i>Possibility modal</i>	T	T/F	(T)
<i>Antecedent of conditional</i>	T	T/F	(T)
<i>Interrogative</i>	T	T/F	(T)

³⁶ C.f. Roberts (2006) and Coppock & Beaver (2013). They have analyzed it as at-issue content.

<i>Non-factive attitude predicate</i>	F	T/F	(T)
<i>Verbs of saying</i>	F	T/F	(T)
<i>Consequent of conditional</i>	T/F	T/F	(T)
<i>Disjunction</i>	T/F	T/F	(T)
	Presupposition	Entailment	(Implicature)

Table 8 Results of projecting tests for propositions related to *only* sentence

5.5. *Even*

5.5.1. *Even* is an inclusive and strictly scalar focus particle

Even is an inclusive focus particle. The focus proposition associated with *even* sentence is true and the alternative proposition is also true. And *even* triggers a scale of likelihood and evaluates the focus as the least likely candidate (König 1991/2002)³⁷.

(132) Even Bill knows it's unethical. (Horn 2006)

P_F = Bill knows it's unethical.

P_{ALT} = Other people know it's unethical.

P_{EVL} = It is least likely that Bill knows it's unethical.

³⁷ Horn (1969), Fauconnier (1975) and Jacobs (1983) stated that scale of *even* sentence depends on the context. Karttunen & Karttunen (1977) and Karttunen & Peters (1979) proposed the likelihood scale of *even*. See Kay (1990) and Gast & van der Auwera (2011) for other analyses.

5.5.2. Theoretical discussion of propositions associated with *even*

In section 5.2.2, I have used *even* as an example of implicature trigger. In that part, I only discussed the evaluation meaning of *even* sentence. In this part, I discuss the other two levels of meanings – the focus proposition and the alternative proposition of *even* sentence.

(133) John can even speak Chinese.

P_F =John can speak Chinese.

P_{ALT} =John can speak other languages.

P_{EVL} =It is least likely that John can speak Chinese.

I conduct the projecting tests on P_F and P_{ALT} in this section:

a. Negation

(134) John cannot even speak Chinese.

Both P_F and P_{ALT} of *even* sentence are false under negation. They are blocked under negation.

b. Possibility modal

(135) It is possible that John can even speak Chinese.

With possibility modal, P_F of *even* sentence is possibly true or possibly false while P_{ALT} is true. P_{ALT} projects under possibility modal, but P_F is blocked.

c. Antecedent of conditional

- (136) If John can even speak Chinese, French would not be a problem for him.

When *even* sentence acts as antecedent of conditional, both P_F and P_{ALT} are possibly true or possibly false. They are blocked in antecedent of conditional.

d. Interrogative

- (137) John can even speak Chinese, can't he?

When embedded under interrogative, both P_F and P_{ALT} of *even* sentence are possibly true or possibly false. They are blocked under interrogatives.

e. Non-factive attitude predicates

- (138) Mary believes that John can even speak Chinese.

With non-factive attitude predicates, both P_F and P_{ALT} of *even* sentence are possibly true or possibly false. They are blocked under non-factive attitude predicates.

f. Verbs of saying

- (139) Mary says that John can even speak Chinese.

With verbs of saying, both P_F and P_{ALT} are possibly true or possibly false. They are blocked under verbs of saying.

g. Consequent of conditional

(140) If Mary can speak French, John can even speak Chinese.

When *even* sentence is used as consequent of conditional, both P_F and P_{ALT} are possibly true or possibly false. They are blocked in consequent of conditional.

h. Disjunction

(141) John can even speak Chinese, or he cannot speak any foreign language.

When *even* sentence is one of the propositions of disjunction, both P_F and P_{ALT} are possibly true or possibly false. They are blocked in disjunction.

We can see that focus proposition of *even* sentences is false under negation and are possibly true or possibly false in all other testing environments; and alternative proposition is true under possibility modal, false in negation and possibly true or possibly false in all other testing environments. This shows that focus proposition and alternative proposition of *even* sentence do not project through these contexts, they are neither presupposition nor implicature.

Focus proposition of *even* sentence seems to be assertion and alternative proposition seem to be entailment of current proposition. Take sentence (133) “John can even speak Chinese” for example. Its focus proposition “John can speak Chinese” has content, reflects the speaker’s belief, and is intended to affect the context, particularly the hearer’s attitude. These features are

consistent with the definition for assertion in Stalnaker (1978). On the other hand, alternative proposition is only sometimes explicit. And the truth of focus proposition requires the truth of the alternative proposition “John can speak other languages”. And when the focus proposition is false, alternative proposition is either true or false. This makes alternative proposition of *even* sentence conforms to the behavior of entailment. Therefore, I analyze focus proposition of *even* sentence as assertion and alternative proposition of *even* sentence as entailment of current proposition.

Evaluation proposition of *even* sentence projects all tested environments. It is consistent with how implicature behaves. For instance, evaluation proposition of *even* sentence (133) (i.e. P_{EVL} =It is least likely that John can speak Chinese.) projects through all contexts from sentence (134) to (141). Therefore, I analyze evaluation proposition of *even* sentence as implicature of current proposition.

Behaviors of focus proposition, alternative proposition and evaluation proposition of *even* sentence are summarized in Table 9.

<i>Testing environments</i>	P_F	P_{ALT}	P_{EVL}
<i>Negation</i>	F	F	T
<i>Possibility modal</i>	T/F	T	T
<i>Antecedent of conditional</i>	T/F	T/F	T
<i>Interrogative</i>	T/F	T/F	T

<i>Non-factive attitude predicate</i>	T/F	T/F	T
<i>Verbs of saying</i>	T/F	T/F	T
<i>Consequent of conditional</i>	T/F	T/F	T
<i>Disjunction</i>	T/F	T/F	T
	Assertion	Entailment	Implicature

Table 9 Results of projecting tests for propositions related to *even* sentence

5.6. *Pianpian*

As I have mentioned in Chapter 2 and Chapter 3, according to my hypothesis, *pianpian* is associated with three levels of meanings – focus proposition, expectation of alternative proposition and the evaluation that the focus proposition is more unexpected and/or undesirable than alternative proposition.

In our corpus data, focus proposition of *pianpian* sentence appears in current context (i.e. current proposition); expectation of alternative proposition appears in preceding context; evaluation of focus proposition being more unexpected than alternative proposition appears either in preceding context or current context and the evaluation of focus proposition being more undesirable than alternative proposition appears in preceding context, current context or following context.

In this section, I discuss these levels of meanings from the theoretical perspective.

5.6.1. Focus proposition and assertion

In this part, I first test whether focus proposition of *pianpian* sentence projects or is blocked in presupposition holes, plugs and filters.

a.Negation

Pianpian is high predicate and *pianpian* sentences cannot be negated:

(142) *他沒有/不偏偏來。

ta meiyou/bu pianpian lai

*‘He didn’t *pianpian* come.’

b.Possibility modal

When embedded under possibility modal, the speaker is not sure about the truth value of focus proposition of *pianpian* sentence. In (143), the speaker thinks it is possible that she is ruthless. In (144), the speaker thinks it is possible that it’s her bad temper that attracted him. The focus propositions of *pianpian* sentence in both examples are possibly true or possibly false.

(143) 她可能偏偏是一個冷酷的、硬心腸的人。

ta kenning pianpian shi yige lengku de, ying xinchang de ren.

‘It’s possible that she *pianpian* is very ruthless.’

P_F=她是一個冷酷的人、硬心腸的人。

‘She is very ruthless.’

(144) 也許偏偏就是這誰也不服的脾氣吸引了他。

yexu pianpian jiu shi zhe shui ye bu fu de pi qi xi yin le ta.

‘It’s possible that pianpian her bad temper attracted him.’

P_F=這誰也不服的脾氣吸引了他。

‘It’s her bad temper that attracted him.’

c. Conditional antecedent

When embedded under antecedent of conditional, focus proposition of *pianpian* sentence is possibly true or possibly false. In (145) and (146), *pianpian* sentence is embedded under 如果 *ruguo* ‘if’, the focus propositions of *pianpian* sentence are possibly true or possibly false. It is possibly true or possibly false that the valve stopped working in the desolate and uninhabited place. It is also possibly true or possibly false that you are timid.

(145) 如果計閥偏偏在那一段杳無人煙的地方停了工，只怕又會出現新的麻煩。

ruguo jifa pianpian zai na yi duan miaowurenyan de defang ting
le gong, zhipa you hui chuxian xin de mafan.

‘If the valve *pianpian* stopped working in the desolate and uninhabited place, it would bring new problems.’

P_F=計閥在那一段杳無人煙的地方停了工。

‘The valve stopped working in the desolate and uninhabited place.’

- (146) 如果你偏偏是一個膽怯的人，只是不得已才過上獨身生活，那你就更容易感受到芸芸眾生施於你的壓力了。

ruguo ni pianpian shi yige danqie de ren, zhishi budeyi cai guoshang dushen shengguo, na ni jiu geng rongyi shoudao yunyunzhongsheng shiyu ni de yali le.

‘If you are *pianpian* timid and you only choose to be single against your will, you will feel more pressure from people around you.’

P_F=你是一個膽怯的人。

‘You are timid.’

d. Interrogative

When *pianpian* sentence is embedded under interrogative, the focus propositions are still possibly true or possibly false. In (147), what is under question is whether the focus proposition 有偏偏喜歡不對稱的強迫症

‘someone likes asymmetry things inevitably’ is true or not. In (148), what is under question is whether the focus proposition 你要等到中考那一天 ‘you have to wait until the high school entrance examination’ is true or not. In both examples, speakers are not sure of the truth values of the focus propositions.

(147) 有沒有偏偏喜歡不對稱的強迫症?

you meiyou pianpian xihuan bu dui cheng de qiangpozhen?

‘Is there anyone pianpian likes asymmetry things inevitably?’

P_F=有喜歡不對稱的強迫症。

‘Someone likes asymmetry things inevitably.’

(148) 偏偏要等到中考那一天嗎?

pianpian yao dengdao zhongkao na yi tian ma?

‘You pianpian have to wait until the high school entrance examination day?’

P_F=等到中考那一天。

‘You have to wait until the high school entrance examination day.’

When the wh-word is *why* or *how come*, the situations are different in that the focus propositions of *pianpian* sentence are true. For instance, in the following two examples, what is under question is the reason why the events

happened. The interrogative operators *why* and *how come* do not affect the truth values of the propositions they are operating on. The focus propositions of *pianpian* sentence are true.

(149) 青州下麵有六個郡，五個郡都有黨人，怎麼平原偏偏會沒有？

qingzhou xiamian you liu ge jun, wu ge jun dou you dang ren,
zenmo pingyuan pianpian hui meiyou?

‘There are communists in five out of six counties in Qingzhou.

How come *pianpian* there are no communists in Pingyuan?’

P_F=平原沒有黨人。

‘There are no communists in Pingyuan.’

(150) 這是我萬萬沒有想到的，我剛到這兒幾個月，他們為什麼偏偏選擇了我這個“外人”來擔此重任呢？

zhe shi wo wanwan meiyou xiangdao de, wo gang dao zheer ji
ge yue, tamen weishenmo pianpian xuanze le wo zhege wairen
lai dan ci zhong ren ne?

‘That is not what I have ever expected as I have just arrived here
for a few months at that time. Why did they *pianpian* choose me
the outsider to be the lead singer?’

P_F=他們選擇我這個“外人”來擔此重任。

‘They chose me the outsider to be the lead singer.’

e. Non-factive attitude predicates

With non-factive attitude predicates³⁸, the current propositions *pianpian* occurs in are possibly true or possibly false. In (151) and (152), the speakers are not sure about the truth values of the focus propositions 未熟的果實毒死了偏愛我的果實的人 ‘green fruits poisoned people who love my fruits’ and 我歪打正著地說對 ‘I happened to get it right’ respectively.

- (151) 我就怕未熟的果實偏偏毒死了偏愛我的果實的人，而憎恨我的東西如所謂正人君子者也偏偏都矍鑠。

wo jiu pa wei chengshu de guoshi pianpian du si le pianai wo de guoshi de ren, er zenghen wo de dongxi ru suowei zhengrenjunzi zhe ye pianpian dou jueshuo.

‘I’m worried that unripe fruits *pianpian* poisoned people who love my fruits, and that those gentlemen who hate my fruits *pianpian* stay healthy.’

P_F=未熟的果實毒死了偏愛我的果實的人。

‘Unripe fruits poisoned people who love my fruits.’

³⁸ *Pianpian* rarely co-occurs with non-factive attitude predicates since most of them are associated with the meaning hope, desire etc., which contrasts with unexpectedness and undesirability meanings of *pianpian*. But this still needs more detailed research.

(152) 我怕人家笑我說得不對，我怕歪打正著地偏偏說對，而被稱為大師。

wo pa renjia xiao wo shuo de bu dui, wo pa waidazhengzhao de pianpian shuodui, er bei chengwei dashi.

‘I’m worried that people would mock at me if I get it wrong. And I’m also worried that I pianpian happened to get it right and people would call me a master.’

P_F=我歪打正著地說對。

‘I happened to get it right.’

f. Verbs of saying

When embedded under verbs of saying, focus proposition of *pianpian* sentence still does not project. This is probably because verbs of saying usually report events from other agents’ perspectives which are not necessarily facts. For examples, in (153) and (154) the speakers are reporting from the perspectives of “them” and “him” respectively and the focus propositions are possibly true or possibly false.

(153) 人們說他們偏偏要穿不成雙結對的鞋，中國人打赤腳不怕，還怕“順跑兒”的鞋。

renmen shuo tamen pianpian yao chuan bu chengshuangjiedui de xie, zhongguoren da chijiao bu pa, hai pa shunpaoer de xie.

‘People say that they pianpian wanted to wear unpaired shoes.

Actually, Chinese people are not afraid of having no shoes to wear, let alone wearing unpaired shoes.’

P_F=他們要穿不成雙結對的鞋。

‘They wanted to wear unpaired shoes.’

(154) 他說人家偏偏在他考試的時候施工。

ta shuo renjia pianpian zai ta kaoshi de shihou shigong.

‘He said that they pianpian carried out road-works when he was taking an exam.’

P_F=人家在他考試的時候施工。

‘They carried out road-works when he was taking an exam.’

g. Consequent of conditional*

Pianpian sentences cannot appear in consequent of conditional. This is probably because *pianpian* is associated with the meaning of unexpectedness which is not consistent with expected consequences.

h. Disjunction

When *pianpian* sentence is one of the propositions in disjunction, the truth values of the focus propositions associated with *pianpian* are uncertain. For instance, in (155) and (156), the two focus propositions 與沙汀的交往把他

們的欠缺處露得過大 ‘their communication with Shading has made their weak points even weaker’ and 有些人靠山吃水 ‘some people try to take advantage of water in mountain areas’ are possibly true or possibly false.

(155) 與沙汀的交往正好顯出他們的優點長處，或偏偏把他們的欠缺處露得過大。

yu Shating de jiaowang zhenghao xianchu tamen de youdian changchu, huo pianpian ba tamen de quexian chu lou de guo da.

‘Their contacts with Shating have unfolded their virtues or pianpian have made flaws manifest excessively.’

P_F=與沙汀的交往把他們的欠缺處露得過大。

‘Their contacts with Shading have made their flaws manifest excessively.’

(156) 有些人靠山不會吃山，或者偏偏要去吃水。

youxieren kao shan bu hui chi shan, huo zhe pianpian yao qu chi shui.

‘Some people do not use the resources around mountains or pianpian try to take advantage of water in mountain areas.’

P_F=有些人靠山吃水。

‘Some people try to take advantage of water in mountain areas.’

Negation and consequent of conditional do not allow *pianpian* sentences to occur. Therefore, we cannot test whether focus propositions of *pianpian* sentences project under these two environments. For syntactic environments where *pianpian* sentences can occur, focus propositions of *pianpian* sentences are only true in *why* and *how come* interrogatives. But *why* and *how come* seem to be too loose among the types of interrogatives as no specific parts of the sentence can be under question. Therefore, the truth-value of focus proposition of *pianpian* sentence is basically only determined in plain sentences. For a *pianpian* sentence 他偏偏去了 ‘He *pianpian* went there’, the focus proposition 他去了 ‘He went there’ has content, represents the speaker’s belief, and is intended to affect the context, particularly the hearer’s attitude. These features conform to the definition for assertion in Stalnaker (1978). Therefore, I analyze focus proposition of *pianpian* sentence as assertion.

5.6.2. Alternative proposition and expectation and/or wish of alternative proposition

As discussed in Chapter 3, the speaker’s expectation and/or wish of alternative proposition either appears explicitly in the context or has to be inferred from context. In this section, I analyze the alternative propositions

and expectation and/or wish of alternative propositions from theoretical perspective.

In the following, I conduct the projecting tests on alternative propositions and expectation and/or wish of alternative propositions to find out their truth values in different syntactic environments.

a.Negation:

Negation is not a legal environment for *pianpian* sentence as mentioned above.

b.Possibility modal:

Under possibility modal, like focus propositions, alternative propositions of *pianpian* sentence are also possibly true or possibly false. In (157) and (158), the two alternative propositions 她是一個親切、心軟的人 ‘she is very kind’ and 她的別的特質吸引了他 ‘her other characteristics attracted him’ are possibly true or possibly false. However, the expectations or wishes of them are true, i.e. the speaker in (157) wishes that she is kind and the speaker in (158) expects that her other characteristics attracted him. The possibility modal does not block the expectations of alternative propositions.

(157) 她可能偏偏是一個冷酷的、硬心腸的人。

ta keneng pianpian shi yge lengkude, yingxin chang deren.

‘It is possible that she pianpian is very ruthless.’

P_{ALT}=她是一個親切、心軟的人。

‘She is very kind.’

P_{EXP}=說話者希望她是一個親切、心軟的人。

‘The speaker wishes that she is very kind.’

(158) 也許偏偏就是這誰也不服的脾氣吸引了他。

texu pianpian jiu shi zhe shui ye bufu de piqi xiyin le ta.

‘It is possible that pianpian her bad temper attracted him.’

P_{ALT}=她的別的特質吸引了他。

‘Her other characteristics attracted him.’

P_{EXP}=說話者預料她的別的特質吸引了他。

‘The speaker predicts that her other characteristics attracted
him.’

c. Conditional antecedent:

When embedded under antecedent of conditional, the truth values of alternative propositions are also uncertain. In (159), alternative proposition 計閥在那一段杳無人煙的地方沒停工 ‘the valve kept working in the desolate and uninhabited place’ is possibly true or possibly false and in (160) alternative proposition 你不是一個膽怯的人 ‘you are not timid’ is also possibly true or possibly false. However, the wishes of these alternative

propositions are true, i.e. the speakers desire that the events 計閥在那一段杳無人煙的地方沒停工 ‘the valve kept working in the desolate and uninhabited place’ and 你不是一個膽怯的人 ‘you are not timid’ happen or exist.

- (159) 如果計閥偏偏在那一段杳無人煙的地方停了工，只怕又會出現新的麻煩。

ruguo jifa pianpian zai na yi duan miaowurenyan de defang ting le gong, zhi pa you hui chuxian xin de mafan.

‘If the valve pianpian stopped working in the desolate and uninhabited place, it would bring new problems.’

P_{ALT}=計閥在那一段杳無人煙的地方沒停工。

‘The valve kept working in the desolate and uninhabited place.’

P_{EXP}=說話者希望計閥在那一段杳無人煙的地方沒停工。

‘The speaker desires that the valve kept working in the desolate and uninhabited place.’

- (160) 如果你偏偏是一個膽怯的人，只是不得已才過上獨身生活，那你就更容易感受到芸芸眾生施於你的壓力了。

ruguo ni pianpian shi yi ge danqie de ren, zhishi budeyi cai guo
shang le dushen shenghuo, na ni jiu geng rongyi ganshou dao
yunyunzhongsheng shiyu nide yali le.

‘If you are pianpian timid and you only choose to be single
against your will, you will feel more pressure from people
around you.’

P_{ALT}=你不是一个胆怯的人。

‘You are not timid.’

P_{EXP}=说话者希望你不是一个胆怯人。

‘The speaker desires that you are not timid.’

d. Interrogative:

In the syntactic environment of interrogatives, alternative propositions are also possibly true or possibly false. For example, in (161) it is unknown whether 沒有喜歡不對稱的強迫症 ‘no one likes asymmetry things inevitably’ is true or not, and in (162) it is unknown whether 不等到中考那一天 ‘you don’t have to wait until the high school entrance examination’ is true or not. But the speaker’s expectations of the alternative propositions are true – the speaker in (161) predicts that no one likes asymmetry things inevitably and the speaker in (162) predicts that you don’t have to wait until the high school entrance examination.

(161) 有沒有偏偏喜歡不對稱的強迫症?

you meiyou pianpian xihuan bu duicheng de qiangpozheng?

‘Is there anyone pianpian likes asymmetry things inevitably?’

P_{ALT}=沒有喜歡不對稱的強迫症。

‘No one likes asymmetry things inevitably.’

P_{ALT}=說話者預料沒有喜歡不對稱的強迫症。

‘The speaker predicts that no one likes asymmetry things inevitably.’

(162) 偏偏要等到中考那一天嗎?

pianpian yao dengdao zhongkao na yi tian ma

‘You pianpian have to wait until the high school entrance examination day?’

P_{ALT}=不等到中考那一天。

‘You don’t have to wait until the high school entrance examination day.’

P_{EXP}=說話者預料不等到中考那一天。

‘The speaker predicts that you don’t have to wait until the high school entrance examination day.’

The situation for interrogatives with *why* or *how come* is different from what I have discussed above. For *pianpian* sentences with *why* and *how come*, alternative proposition is false, and expectation of alternative sentence is true. For sentence (163), it is false that 平原有黨人 ‘there are communists in Pingyuan’ and it is true that the speaker predicts that there are communists in Pingyuan. Similarly, for sentence (164), it is false that 他們選擇其他人來擔此重任 ‘they chose other people to be the lead singer’ and it is true that the speaker predicts that they chose someone else to be the lead singer.

(163) 青州下麵有六個郡，五個郡都有黨人，怎麼平原偏偏會沒有？

qingzhou xiamian you liu ge jun, wu ge jun dou you dang ren,
zenmo pingyuan pianpian hui meiyou.

‘There are communists in five out of six counties in Qingzhou.
How come *pianpian* there are no communists in Pingyuan?’

P_{ALT}=平原有黨人。

‘There are communists in Pingyuan.’

P_{EXP}=說話者預料平原有黨人。

‘The speaker predicts that there are communists in
Pingyuan.’

(164) 這是我萬萬沒有想到的，我剛到這兒幾個月，他們為什麼偏偏選擇了我這個“外人”來擔此重任呢？

zhe shi wo wanwan meiyou xiangdao de, wo gang dao zheer ji
ge yue, tamen weishenmo pianpian xuanze le wo zhege wairen
lai danci zhongren ne?

‘That is not what I have ever expected as I have just arrived here
for a few months at that time. Why did they pianpian choose me
the outsider to be the lead singer?’

P_{ALT}=他們選擇其他人來擔此重任。

‘They chose someone else to be the lead singer.’

P_{EXP}=說話者預料他們選擇其他人來擔此重任。

‘The speaker predicts that they chose someone else to be
the lead singer.’

e. Non-factive attitude predicates:

With non-factive attitude predicates, the truth values of alternative propositions associated with *pianpian* sentence are uncertain, while the expectations of these alternative propositions are true. In the following two examples, the alternative propositions 未熟的果實沒有毒死偏愛我的果實的人 ‘Unripe fruits didn’t poison people who love my fruits’ and 我說得不

對 ‘I didn’t get it right’ are possibly true or possibly false. However, the speaker in (165) wishes that unripe fruits didn’t poison people who love his fruits and the speaker in (166) predicts that he didn’t get it right.

(165) 我就怕未熟的果實偏偏毒死了偏愛我的果實的人，而憎恨我的東西如所謂正人君子者也偏偏都矍鑠。

wo jiu pa wei shu de guoshi pianpian dushi le pianai wo de guoshi
de ren, er zhenghen wode dongxi ru suwei zhengrenjunzi zhe
ye pianpian dou jueshuo.

‘I’m worried that unripe fruits pianpian poisoned people who
love my fruits, and that those so-called gentlemen who hate my
fruits pianpian stay healthy.’

P_{ALT}=未熟的果實沒有毒死偏愛我的果實的人。

‘Unripe fruits didn’t poison people who love my fruits.’

P_{EXP}=說話者希望未熟的果實沒有毒死偏愛他的果實的人。

‘The speaker wishes that unripe fruits didn’t poison people
who love his fruits.’

(166) 我怕人家笑我說得不對，我怕歪打正著地偏偏說對，而被稱為大師。

wo pa ren jia xiaowo shuo de bu dui, wo pa waidazhengzhao de
pianpian shuodui, er bei chengwei dashi.

‘I’m worried that people would mock at me if I get it wrong. And
I’m also worried that I pianpian happened to get it right and people
would call me a master.’

P_{ALT}=我說得不對。

‘I didn’t get it right.’

P_{EXP}=說話者預料自己說得不對。

‘The speaker predicts that he didn’t get it right.’

f. Verbs of saying

The situation of verbs of saying is very similar to that of non-factive attitude predicates: with verbs of saying, the truth values of alternative propositions associated with *pianpian* sentence are uncertain while the expectations or wishes of these alternative propositions are true. In the following two examples, the truth-values of the alternative propositions 他們穿成雙結對的鞋 ‘They wear shoes in pairs’ and 人家沒有在他考試的時候施工 ‘They didn’t carry out road-works when he was taking an exam or not’ are uncertain. However, the speaker in (167) predicts that they wear shoes in pairs and the speaker in (168) wishes that they didn’t carry out road-works when he was taking an exam’.

(167) 人們說他們偏偏要穿不成雙結對的鞋, 中國人打赤腳不怕,
還怕“順跑兒”的鞋。

renmen shuo tamen pianpian yao chuan bu chengshuangjiedui de xie,
zhongguoren da chijiao bu pa, hai pa shunpaoer de xie.

‘People say that they pianpian wanted to wear unpaired shoes.
Actually, Chinese people are not afraid of having no shoes to wear,
let alone wearing unpaired shoes.’

P_{ALT}=他們穿成雙結對的鞋。

‘They wear unpaired shoes.’

P_{EXP}=說話者預料他們穿成雙結對的鞋。

‘The speaker predicts that they wear paired shoes.’

(168) 他說人家偏偏在他考試的時候施工。

ta shuo renjia pianpian zai ta kaoshi de shihou shigong.

‘He said that they pianpian carried out road-works when he was
taking an exam.’

P_{ALT}=人家沒有在他考試的時候施工。

‘They didn’t carry out road-works when he was taking an
exam.’

P_{EXP}=說話者希望人家沒有在他考試的時候施工。

‘The speaker wishes that they didn’t carry out road-works
when he was taking an exam.’

g. Consequent of conditional*

Pianpian sentences do not occur in consequent of conditional.

h. Disjunction

When *pianpian* sentence appears in one of the propositions of disjunction, the truth values of the alternative propositions are uncertain, and the expectations of these alternative propositions are true. In (169), the alternative proposition is 與沙汀的交往顯出他們的優點長處 ‘Their contacts with Shating have unfolded their virtues’ and it is possibly true or possibly false. But the speaker wishes it to happen. In (170), the alternative proposition is 靠山吃山 ‘people depend on resources around mountains in mountain areas’ and it is possibly true or possibly false. The speaker expects it to happen.

(169) 與沙汀的交往正好顯出他們的優點長處，或偏偏把他們的
缺欠處露得過大。

yu shating de jiaowang zhenghao xianchu tamen de youdian
changchu, huo pianpian ba tamen de queqianchu lou de gou da.

‘Their contacts with Shating have unfolded their virtues or
pianpian have made flaws manifest excessively.’

P_{ALT}=與沙汀的交往顯出他們的優點長處。

‘Their contacts with Shating have unfolded their virtues.’

P_{EXP}=說話者希望與沙汀的交往顯出他們的優點長處。

‘The speaker wishes that their contacts with Shating
have unfolded their virtues.’

(170) 靠山不會吃山，或者偏偏要去吃水。

kao shan bu hui chi shan, huozhe pianpian yao qu chi shui.

‘Some people do not use the resources around mountains or
pianpian try to take advantage of water in mountain areas.’

P_{ALT}=靠山吃山。

‘People depend on resources around mountains in mountain
areas.’

P_{EXP}=說話人預料人們靠山吃山。

‘The speaker predicts that people depend on resources
around mountains in mountain areas.’

The alternative propositions of *pianpian* sentence are false in *why* and *how come* interrogatives and are possibly true or possibly false in other grammatical environments we tested. This shows that alternative proposition is neither presupposition nor implicature of current proposition. Negation of

alternative proposition of *pianpian* sentence seems to be entailment of current proposition. Take the sentence 他偏偏去了 ‘He pianpian went there’ for example. Its focus proposition is 他去了 ‘He went there’ and its alternative proposition is 他沒去 ‘He didn’t go there’. The truth of focus proposition requires denying of the alternative proposition. And when the focus proposition is false, alternative proposition is true for this type of example and is possibly true or false in another type of example. For instance, for sentence 他偏偏在北京 ‘He is pianpian in Beijing’, its alternative propositions 他在上海 ‘He is in Shanghai’ and 他在南京 ‘He is in Nanjing’ etc. are possibly true or false when the focus proposition 他在北京 ‘He is in Beijing’ is false. This makes alternative proposition of *pianpian* sentence consistent with the behavior of entailment. Therefore, I analyze alternative proposition of *pianpian* sentence as entailment of current proposition.

On the other hand, the expectation of alternative proposition of *pianpian* sentence maintains true in all testing environments except negation and consequent of conditional where *pianpian* cannot occur. The projecting behaviors of the expectation of alternative proposition conforms to that of implicature, therefore I analyze it as implicature of current proposition.

5.6.3. The evaluation meaning and implicature

Another level of meaning associated with *pianpian* sentence is that the speaker evaluates the focus proposition as being more surprising (i.e. unexpected, undesirable or in both dimensions). In this section, I analyze this level of meaning from the theoretical perspectives.

In the following, I test the truth values of the evaluation commitment when *pianpian* sentences are embedded under different projecting conditions.

a.Negation*

Negation is not a legal environment for *pianpian* sentences.

b.Possibility modal

When embedded under possibility modals, propositions of evaluation associated with *pianpian* sentences are true: in (171) the speaker commits that it is more undesirable for her to be very ruthless than to be very kind and in (172) the speaker commits that it is more unexpected if it is her bad temper that attracted him than if it is her other characteristics that attracted him.

(171) 她可能偏偏是一個冷酷的、硬心腸的人。

ta keneng pianpian shi yi ge lengude, yingxinchang de ren.

‘It’s possible that she pianpian is very ruthless.’

P_{EVL}=The speaker evaluates: Undesirableness (她是一個冷酷的、硬心腸的人 ‘She is very ruthless’) >³⁹ Undesirableness (她是一個親切、軟心腸的人 ‘She is very kind’)

(172) 也許偏偏就是這誰也不服的脾氣吸引了他。

yexu pianpian jiu shi zhe shui ye bu fu de piqi xiyin le ta.

‘It is possible that pianpian her bad temper attracted him.’

P_{EVL}=The speaker evaluates: Unexpectedness (她的壞脾氣吸引了他 ‘Her bad temper attracted him’) > Unexpectedness (她的其他特質吸引了他 ‘Her other characteristics attracted him’)

c. Antecedent of conditional

When *pianpian* sentence occurs in antecedent of conditional, the relevant evaluation proposition is true: the speaker thinks that the focus event is less desirable or less predictable than alternative event. For example, in sentence (173) the speaker’s evaluation is that it is more undesirable if the valve stopped working in the desolate and uninhabited place than if it didn’t stop working in the desolate and uninhabited place. And in sentence (174) the speaker’s evaluation is that it is more undesirable if you are timid than if you are not timid.

³⁹ I use the symbol “>” here to mean that the item preceding it is more unexpected or undesirable than the one following it according to the speaker.

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- (173) 如果計閥偏偏在那一段杳無人煙的地方停了工，只怕又會出現新的麻煩。

ruguo jifa pianpian zai na yi duan miaowurenyan de difnag ting
le gong, zhi pa you hui chuixan xin de mafan.

‘If the valve pianpian stopped working in the desolate and
uninhabited place, it would bring new problems.’

P_{EVL}= The speaker evaluates: Undesirableness (計閥在那一段
杳無人煙的地方停了工 ‘The valve stopped working in the
desolate and uninhabited place’) > Undesirableness (計閥沒在
那一段杳無人煙的地方停工 ‘The valve didn’t stop working
in the desolate and uninhabited place’)

- (174) 如果你偏偏是一個膽怯的人，只是不得已才過上獨身生活，
那你就更容易感受到芸芸眾生施於你的壓力了。

ruguo ni pianpian shi yi ge danqie de ren, zhi shi budeyi cai
guoshang le dushen shenghuo, na ni jiu geng rongyi ganshou
dao yunyun zhongsheng shiyu ni de yali le.

‘If you are pianpian timid and you only choose to be single
against your will, you will feel more pressure from people
around you.’

P_{EVL} = The speaker evaluates: Undesirableness (你是一個膽怯的人 ‘You are timid’) > Undesirableness (你不是一個膽怯的人 ‘You are not timid’)

d. Interrogative

The evaluation propositions of *pianpian* sentences are true in all kinds of interrogatives, i.e. the interrogative operator never affects the subjective evaluation meaning of *pianpian*. For A-NOT-A question (175), the speaker’s commitment to the current proposition (i.e. 有人強迫性地喜歡不對稱的東西 ‘Someone likes asymmetry things inevitably’) is that it is more unexpected than the alternative proposition (i.e. 沒有人強迫性地喜歡不對稱的東西 ‘No one likes asymmetry things inevitably’). And for *why* question (176), the speaker’s commitment to current proposition (i.e. 他們選擇我這個外人來當主唱 ‘They chose me the outsider to be the lead singer’) is that it is more unexpected than the alternative proposition (i.e. 他們選擇其他人來當主唱 ‘They chose other people to be the lead singer’).

(175) 有沒有偏偏喜歡不對稱的強迫症?

you meiyou pianpian xihuan bu duicheng de qiangpozhen?

‘Is there anyone pianpian likes asymmetry things inevitably?’

P_{EVL} = The speaker evaluates: Unexpectedness (有人強迫性地喜歡不對稱的東西 ‘Someone likes asymmetry things

inevitably') > Unexpectedness (沒有人強迫性地喜歡不對稱的東西 'No one likes asymmetry things inevitably')

(176) 這是我萬萬沒有想到的, 我剛到這兒幾個月, 他們為什麼偏偏選擇了我這個“外人”來擔此重任呢?

zhe shi wo wanwan meiyou xiangdao de, wo gang dao zheer ji
ge yue, tamen weishenmo pianpian xuanze le wo zhe ge wairen
lai danci zhongren ne?

'That is not what I have ever expected as I have just arrived here
for a few months at that time. Why did they pianpian choose me
the outsider to be the lead singer?'

P_{EVL}= The speaker evaluates: Unexpectedness (他們選擇我這
個外人來當主唱 'They chose me the outsider to be the lead
singer') > Unexpectedness (他們選擇別的人當主唱 'They
chose someone else to be the lead singer').

e. Non-factive attitude predicates

When *pianpian* co-occurs with non-factive attitude predicate, the evaluation proposition related to *pianpian* sentence is true, i.e. the attitude the speaker expresses through *pianpian* is that focus proposition is more unexpected or undesirable than alternative proposition. For instance, in (177) the speaker's evaluation is that the focus proposition 未熟的果實毒死了偏愛我的果實

的人 ‘unripe fruits poisoned people who love my fruits’ is more undesirable than the alternative proposition 未熟的果實沒有毒死偏愛我的果實的人 ‘unripe fruits didn’t poison people who love my fruits’. And in (178), the speaker’s evaluation is that the focus proposition 我說對了 ‘I got it right’ is more unexpected than the alternative proposition 我沒有說對 ‘I didn’t get it right’.

(177) 我就怕未熟的果實偏偏毒死了偏愛我的果實的人，而憎恨我的東西如所謂正人君子者也偏偏都雙饒。

wo jiu pa wei shu de guoshi pianpian dushi le pianai wo de guoshi
de ren, er zenghen wo de dongxi ru suowei zhengrenjunzi zhe
ye pianpian dou jueshuo.

‘I’m worried that unripe fruits pianpian poisoned people who
love my fruits, and that those gentlemen who hate my fruits
pianpian stay healthy.’

P_{EVL}= The speaker evaluates: Undesirableness (未熟的果實毒
死了偏愛我的果實的人 ‘Unripe fruits poisoned people who
love my fruits’) > Undesirableness (未熟的果實沒有毒死偏愛
我的果實的人 ‘Unripe fruits didn’t poison people who love
my fruits’)

(178) 我怕人家笑我說得不對，我怕歪打正著地偏偏說對，而被稱為大師。

wo pa ren jia xiao wo shuo de bu dui, wo pa waidazhengzhao de pianpian shuo dui, er bei chengwei dashi.

‘I’m worried that people would mock at me if I get it wrong. And I’m also worried that I pianpian happened to get it right and people would call me a master.’

PEVL= The speaker evaluates: Unexpectedness (我說對了 ‘I got it right’) > Unexpectedness (我沒有說對 ‘I didn’t get it right’)

f. Verbs of saying

When *pianpian* co-occurs with verbs of saying, evaluation propositions related to *pianpian* sentences are true: speaker’s commitment to the sentence *pianpian* appears in is that the focus proposition is more unexpected or undesirable than the alternative proposition. For example, in (179) the speaker evaluates the focus proposition 他們要穿不成雙結對的鞋 ‘They wore shoes not in pairs’ as more unexpected than the alternative proposition 他們穿成雙結對的鞋 ‘They wore paired shoes’. And in (180), the speaker evaluates the focus proposition 人家在他考試的時候施工 ‘They carried out road-works when he was taking an exam’ as more undesirable than the

alternative proposition 人家在其他時候施工 ‘They carried out road-works during other time periods’.

- (179) 人們說他們偏偏要穿不成雙結對的鞋，中國人打赤腳不怕，還怕“順跑兒”的鞋。

renmen shuo tamen pianpianyao chuan bu chengshuangjiedui de xie, zhonguoren da chijiao bu pa, hai pa shunpaoer de xie.

‘People say that they pianpian wanted to wear unpaired shoes. Actually, Chinese people are not afraid of having no shoes to wear, let alone wearing unpaired shoes.’

P_{EVL} = The speaker evaluates: Unexpectedness (他們要穿不成雙結對的鞋 They wore shoes not in pairs.) > Unexpectedness (他們穿成雙結對的鞋 They wore paired shoes.)

- (180) 他說人家偏偏在他考試的時候施工。

ta shuo renjia pianpian zai ta kaoshi de shihou shigong.

‘He said that they pianpian carried out road-works when he was taking an exam.’

P_{EVL} = The speaker evaluates: Undesirableness (人家在他考試的時候施工 ‘They carried out road-works when he was taking an exam’) > Undesirableness (人家在其他時候施工 ‘They carried out road-works during other time periods’)

g. Consequent of conditional *

As I mentioned previously, *pianpian* sentence never appears as consequent of conditional.

h. Disjunction

When *pianpian* sentence works as one of the propositions in disjunction, the evaluation meaning of the *pianpian* sentence maintains: the speaker evaluates the focus proposition as a more unexpected or undesirable event than alternative proposition. For examples, the speaker in (181) thinks that the focus proposition 與沙汀的交往把他們的缺欠處露得過大 ‘Their contacts with Shading have made their flaws manifest excessively’ is more undesirable than the alternative proposition 與沙汀的交往正好顯出他們的優點長處 ‘Their contacts with Shading have unfolded their virtues’. And the speaker in (182) thinks that the focus proposition 靠山生活的人要去吃水 ‘People depend on resources around water when they live in mountain places’ is more unexpected than the alternative proposition 靠山吃山 ‘People depend on resources around mountains when they live in mountain places’.

(181) 與沙汀的交往正好顯出他們的優點長處，或偏偏把他們的缺欠處露得過大。

yu shating de jiaowang zhenghao xianchutamen de youdian
changchu, huo pianpian ba tamen de queqianchu lou de guo da.

‘Their contacts with Shating have unfolded their virtues or pianpian have made flaws manifest excessively.’

P_{EVL} =The speaker evaluates: Undesirableness (與沙汀的交往把他們的缺欠處露得過大 ‘Their contacts with Shating have made their flaws manifest excessively’) > Undesirableness (與沙汀的交往正好顯出他們的優點長處 ‘Their contacts with Shating have unfolded their virtues’)

(182) 靠山不會吃山，或者偏偏要去吃水。

kao shan buhui chi shan, huozhe pianpian yao qu chishui.

‘Some people living in mountain areas do not use the resources around mountains or pianpian try to take advantage of water.’

P_{EVL} = The speaker evaluates: Unexpectedness (靠山生活的人要去吃水 ‘People depend on resources around water when they live in mountain places’) > Unexpectedness (靠山吃山 ‘People depend on resources around mountains when they live in mountain places’)

Commitment of evaluation in *pianpian* sentence evaded nearly all projecting tests except the ones *pianpian* cannot appear in. This shows that the speaker’s evaluation in *pianpian* sentence behaves just like an implicature which project through all presupposition holes, plugs and filters. Other than the projecting

properties, proposition of speaker's evaluation also displays other properties of implicature:

- a. P_{EVL} is about new information: in sentence "I pianpian got the first prize", the speaker thinks that it is unexpected that he got first prize (than not getting first prize). This is new information the speaker expresses.
- b. P_{EVL} is non-cancelable. *Pianpian* sentence always represents speaker's attitude of unexpected or undesirability.
- c. P_{EVL} is non-truth-conditional part of current proposition: in sentence "I pianpian got the first prize", the speaker's attitude is not part of the truth-conditional meaning. It is subjective commitment to the current proposition.
- d. P_{EVL} is secondary when compared with the main truth-conditional meaning. Speaker's evaluation of unexpectedness is secondary compared with the propositional meaning that "I got the first prize".
- e. P_{EVL} is not calculable. The evaluation meaning of *pianpian* sentence cannot be calculated based on Grice's cooperative principle.
- f. P_{EVL} is semantic in the sense of being represented by specific triggers. *Pianpian* is the lexical trigger of the unexpectedness meaning in sentences like "I pianpian got the first prize".

g. P_{EVL} is context-sensitive in that whether it is the meaning of unexpectedness or undesirability and the events compared and evaluated vary in different context.

Even though *pianpian* cannot occur in some of the testing environments, I analyze speaker's evaluation meaning of *pianpian* as conventional implicature of current proposition based on how it behaves in other grammatical environments.

Behaviors of focus proposition, alternative proposition (also expectation of alternative proposition) and evaluation proposition of *even* sentence are summarized in

Table 10.

<i>Testing environments</i>	P_F	P_{ALT}	P_{EXP}	P_{EVL}
<i>Negation</i>	*	*	*	*
<i>Possibility modal</i>	T/F	T/F	T	T
<i>Antecedent of conditional</i>	T/F	T/F	T	T
<i>Interrogative</i>	T/F ⁴⁰	T/F ⁴¹	T	T
<i>Non-factive attitude predicate</i>	T/F	T/F	T	T
<i>Verbs of saying</i>	T/F	T/F	T	T
<i>Consequent of conditional</i>	*	*	*	*
<i>Disjunction</i>	T/F	T/F	T	T
	Assertion	Entailment	Implicature	Implicature

⁴⁰ P_F is true in *why* and *how come* interrogatives.

⁴¹ P_{ALT} is also true in *why* and *how come* interrogatives.

Table 10 Results of projecting tests for propositions related to *pianpian* sentence

5.7. Summary

In this chapter, I reviewed how presupposition, implicature, assertion and entailment are defined and tested. And I claim that

- a. For *only* sentence, focus proposition is presupposition of current proposition, alternative proposition is entailment of current proposition, evaluation proposition (when there is one) is implicature of current proposition;
- b. For *even* sentence, focus proposition is assertion, alternative proposition is entailment of current proposition, evaluation proposition is implicature of current proposition;
- c. For *pianpian* sentence, focus proposition is assertion, alternative proposition is entailment of current proposition, evaluation proposition is implicature of current proposition.

Therefore, we can see that focus particles *only*, *even* and *pianpian* show both similarities and dissimilarities in terms of behaviors of associated propositions. I present them in Table 11.

	<i>P_F</i>	<i>P_{ALT}</i>	<i>P_{EXP}</i>	<i>P_{EVL}</i>
<i>Only</i>	Presupposition	(~ <i>P_{ALT}</i>) Entailment	/	(<i>P_{EVL}</i>) (Implicature)
<i>Even</i>	Assertion	Entailment	/	Implicature
<i>Pianpian</i>	Assertion	Entailment	Implicature	Implicature

Table 11 *Only* vs. *even* vs. *pianpian* in terms of related propositions

Chapter 6

6. Discussion and Conclusion

6.1. *Pianpian* and cross-propositional logic

Based on the results from corpus analysis, behavior experiment and theoretical analysis, I conclude that:

- a. *Pianpian* is an exclusive and strictly scalar focus particle;
- b. *Pianpian* is a speaker-oriented adverb with surprise meaning (unexpectedness and/or undesirableness) which affects the logic among related propositions or different levels of meanings associated with *pianpian* sentence;
- c. *Pianpian* influences cross-propositional logic. In a *pianpian* sentence, it renders focus proposition as assertion, alternative position as entailment of current proposition, expectation of alternative proposition as implicature and evaluation proposition as implicature of current proposition.

These features of *pianpian* are consistent with each other. *Pianpian* is a focus particle as well as a speaker-oriented adverb. The unexpectedness and undesirableness scalarity meanings of *pianpian* make it an evaluative adverb which behaves like normal speaker-oriented adverbs – positioning before modals, negations, time adverbs, degree adverbs etc.

Pianpian is similar to focus particle *only* in the sense that they are exclusive focus particles and their evaluation propositions are implicatures. However,

pianpian is different from *only* in the sense that **(a)**. the scalarity feature of *pianpian* is non-optional and **(b)**. that focus proposition of *pianpian* is assertion instead of presupposition.

Pianpian is similar to focus particle *even* in the sense that they are scalar focus particles and their focus propositions are assertions, their alternative propositions are entailments and their evaluation proposition are implicatures. However, it is different from *even* in the sense that **(a)**. *pianpian* is an exclusive focus particle, **(b)**. with *pianpian*, that speaker (explicitly or implicitly) predicts or wishes(desires) the alternative event (proposition) to happen (exist).

In Table 12, I summarize the similarities and differences of focus particles *even*, *only* and *pianpian* in terms of exclusiveness and scalarity.

	<i>Exclusiveness</i>	<i>Scalartity</i>	
<i>Even</i>	—	+	scale of likelihood
<i>Only</i>	+	+/-	context-dependent scale if any
<i>Pianpian</i>	+	+	scale of surprise (unexpectedness and/or undesirableness)

Table 12 *Even*. vs. *only* vs. *pianpian* in terms of exclusiveness and scalarity

Pianpian is similar to normal speaker-oriented adverbs (such as luckily, probably and frankly) in that they all commit a certain kind of subjective

judgement to propositions. But *pianpian* is different from them in that it affects the logic among related propositions while normal speaker-oriented adverbs only influence the current proposition they appear in.

Based on the conclusion of this research, the definition of speaker-oriented adverb needs to be amended to include adverbs like *pianpian*. Speaker-oriented adverbs include not only adverbs that commit a kind of subjective judgement towards current proposition it occurs in but also adverbs that commit a kind of subjective judgement towards the logical relation among related propositions of the speaker.

6.2. Future work

6.2.1. *Pianpian* vs. *Pian*⁴²

Lv (1980) stated that 偏偏 *pianpian* and 偏 *pian* are interchangeable. Based on my observation, *pianpian* and *pian* are different although they are etymologically related and tend to be misused in contexts where they can both occur. I claim that *pianpian* is speaker-oriented adverb with unexpectedness and/or undesirableness meaning and *pian* is a subject-oriented adverb with volition meaning. For instance,

(183) 困難有什麼了不起，我偏偏要去碰碰它。

⁴² It is not possible to retrieve *pian* in corpus without part of speech tag. Examples sentences of *pian* can be found in Leeds corpus: <http://corpus.leeds.ac.uk/internet.html>.

kunna you shenme liaobuqi, wo pianpian yao qu pengpeng ta.

‘Difficulties are not big deals, I pianpian want to challenge myself.’

(184) 困難有什麼了不起，我偏要去碰碰它。

kunnan you shenme liaobuqi, wo pian yao qu pengpeng ta.

‘Difficulties are not big deals, I pian want to challenge myself.’

In sentence (183) and sentence (184), *pianpian* and *pian* seem to be interchangeable as both of these two sentences are grammatical. But this does not mean the two sentences have the same interpretations. The *pianpian* sentence (183) means “Difficulties usually tend to be avoided, however surprisingly I want to challenge myself”, while the *pian* sentence (184) means “Someone doesn’t want me to deal with any difficult situations, but I volitionally want to challenge myself”. This shows that *pianpian* and *pian* express different meanings and are not interchangeable although *pianpian* seems only to be the duplication of *pian* phonologically and morphologically. In some examples, substituting *pianpian* with *pian* would render the sentence as ungrammatical. For instance, sentence (185) is grammatical while sentence (186) is ungrammatical.

(185) 困難有什麼了不起，我偏偏沒有退縮。

kunnan you shenme liaobuqi, wo pianpian meiyou tuosuo.

Difficulties are not big deals, I pianpian didn't hold back.

(186) *困難有什麼了不起，我偏沒有退縮。

kunnan you shenme liaobuqi, wo pian meiyou tuosuo.

*Difficulties are not big deals, I pian didn't hold back.

If the negation marker 沒有 *meiyou* 'not' in (185) is replaced by negation marker 不 *bu* 'not', the sentence becomes acceptable.

(187) 困難有什麼了不起，我偏不退縮。

kunnan you shenme liaobuqi, wo pian bu tuosuo.

'Difficulties are not big deals, I pian won't hold back.'

Pian frequently co-occurs with negation marker 不 *bu* 'not' and modal verb 要 *yao* 'want'. For example,

(188) 我偏不去，看你能把我怎樣？

wo pian bu qu, kan ni neng ba wo zen yang?

'I pian won't go there (although you commanded me to go there). It's not like you can do anything about it.'

(189) 我不讓他去，他偏要去。

wo bu rang ta qu, ta pian yao qu.

'I asked him not to go there. He pian will go.'

When the subject and the speaker of a sentence are the same person, like in sentence (188), it becomes confused whether *pian* is speaker-oriented or subject-oriented. *Pian* expresses the volition of the subject 我 *wo* ‘I’ (it is also the speaker in this example) to disobey “your” command of going there. But when the subject and the speaker of a sentence are not the same person, it becomes clearer. In sentence (189), 我 *wo* ‘I’ is the speaker of *pianpian* sentence and 他 *ta* ‘he’ is the subject. *Pian* represents the volition of subject 他 *ta* ‘he’ to disobey “my” command of not going there. We can see that *pian* always expresses the subject’s volition.

In fact, *pianpian* and *pian* can co-occur in the same sentence. This is strong evidence to say that *pianpian* and *pian* convey different information. For example,

(190) 我不讓他去，可偏偏沒想到他偏要去。

wo bu rang wo qu, but pianpian meixiangdao ta pian yao qu.

‘I asked him not to go there, but pianpian unexpectedly he pian will go.’

This sentence shows that *pianpian* and *pian* are different types of subjective adverbs as *pianpian* expresses speaker’s evaluation while *pian* expresses subject’s volition.

6.2.2. Other future studies

This dissertation only involves one case study – Mandarin adverb *pianpian*. In future research, I will expand to explore how similar subjective Mandarin adverbs (such as 確實 *queshi*, 根本 *genben* etc.) affect cross-propositional logic and how similar subjective adverbs behave typologically.

Besides the behavioral experimental evidence provided for the exclusiveness property of *pianpian*, in the future I will use psycholinguistic (e.g. eye tracking experiment) and neurolinguistic methods (e.g. EEG, fMRI etc.) to test the exclusiveness property of *pianpian* and adverbs alike. I will also conduct psycholinguistic and neurolinguistic experiments to test the unexpectedness and/or undesirableness features of *pianpian* and semantic features of similar speaker-oriented adverbs and subject-oriented adverbs. In addition, diachronic, corpus-based and experimental evidence will be provided for the comparison of *pianpian* and *pian* and other groups of adverbs difficult to differentiate in future studies.

Appendix I. Stimuli of Experiment 1

(Presented to participants in 4 lists)

1	A:冰箱里有菠菜、豆腐、西紅柿。我猜菠菜和西紅柿變質了。 B:是嗎?好像豆腐變質了。 a.菠菜變質了。 b.西紅柿變質了。 c.豆腐變質了。 d.芹菜變質了。
2	A:書桌上有英語書、數學書、物理書。我猜數學書和物理書看完了。 B:是嗎?英語書看完了。 a.物理書看完了。 b.數學書看完了。 c.化學書看完了。 d.英語書看完了。
3	A:王軒、張明、劉博文都去食堂了。我猜小李約了劉博文和張明。 B:對, 小李確實約了張明。 a.小李約了王軒。 b.小李約了劉博文。 c.小李約了張明。 d.小李約了林彥華。
4	A:王軒、張明、劉博文都去參觀美術館了。我猜劉博文和王軒看了攝影展。 B:對, 確實王軒看了攝影展。 a.王軒看了攝影展。 b.張明看了攝影展。 c.劉博文看了攝影展。 d.林彥華看了攝影展。
5	A:早茶店裡有蝦餃、燒麥、叉燒包。我猜蝦餃和叉燒包點完了。 B:對, 叉燒包確實點完了。 a.腸粉點完了。 b.叉燒包點完了。 c.蝦餃點完了。 d.燒麥點完了。
6	A:陽台上有綠蘿、仙人掌、金錢草。我猜小李澆了綠蘿和金錢草。 B:不對, 她_/只/還/偏偏澆了仙人掌。 a.小李澆了仙人掌。 b.小李澆了綠蘿。 c.小李澆了金錢草。 d.小李澆了吊蘭。

7	<p>A:王軒、張明、劉博文都去玩了。我猜劉博文和張明去八達嶺了。 B:不對，_/只有/還有/偏偏王軒去八達嶺了。 王軒去八達嶺了。 a.張明去八達嶺了。 b.劉博文去八達嶺了。 d.林彥華去八達嶺了。</p>
8	<p>A:盒子里有鉛筆、尺子以及剪刀。我猜小李拿走了尺子和剪刀。 B:不對，他_/只/還/偏偏拿走了鉛筆。 a.小李拿走了鉛筆。 b.小李拿走了尺子。 c.小李拿走了剪刀。 d.小李拿走了橡皮。</p>
9	<p>A:水果盤里有桃子、梨以及蘋果。我猜小李吃了梨和蘋果。 B:不對，她_/只/還/偏偏吃了桃子。 a.小李吃了桃子。 b.小李吃了梨。 c.小李吃了蘋果。 d.小李吃了哈密瓜。</p>
10	<p>A:王軒、張明、劉博文都去買電腦了。我猜店員騙了張明和劉博文。 B:是嗎？店員好像騙了王軒。 a.店員騙了張明。 b.店員騙了林彥華。 c.店員騙了王軒。 d.店員騙了劉博文。</p>
11	<p>A:電視台有真人秀、相親節目、美食節目，我猜相親節目和美食節目停播了。 B:不對，_/只有/還有/偏偏真人秀停播了。 a.美食節目停播了。 b.旅遊節目停播了。 c.相親節目停播了。 d.真人秀停播了。</p>
12	<p>A:王軒、張明、劉博文都學文學專業。我猜劉博文和張明選了現當代文學。 B:是嗎？好像王軒選了現當代文學。 a.王軒選了現當代文學。 b.張明選了現當代文學。 c.劉博文選了現當代文學。 d.林彥華選了現當代文學。</p>
13	<p>A:王軒、張明、劉博文都在同一家公司上班。我猜經理器重張明和劉博文。 B:不對，經理_/只/還/偏偏器重王軒。</p>

	<p>a.經理器重林彥華。 b.經理器重王軒。 c.經理器重劉博文。 d.經理器重張明。</p>
14	<p>A:王軒、張明、劉博文都賣力工作。我猜領導提拔了劉博文和王軒。 B:是嗎? 領導好像提拔了張明。 a.領導提拔了劉博文。 b.領導提拔了張明。 c.領導提拔了林彥華。 d.領導提拔了王軒。</p>
15	<p>A:王軒、張明、劉博文都去健身房了。我猜張明和劉博文舉了啞鈴。 B:對, 確實劉博文舉了啞鈴。 a.劉博文舉了啞鈴。 b.王軒舉了啞鈴。 c.張明舉了啞鈴。 d.林彥華舉了啞鈴。</p>
16	<p>A:王軒、張明、劉博文都去圖書館了。我猜王軒和劉博文去借書了。 B:不對, _/只有/還有/偏偏張明去借書了。 a.張明去借書了。 b.劉博文去借書了。 c.王軒去借書了。 d.林彥華去借書了。</p>
17	<p>A:體育中心有游泳班、太極班、網球班, 我猜游泳班和網球班滿員了。 B:不對, _/只有/還有/偏偏太極班滿員了。 a.乒乓球班滿員了。 b.太極班滿員了。 c.網球班滿員了。 d.游泳班滿員了。</p>
18	<p>A:傢具店有桌子、書櫃以及床。我猜小李看了床和桌子。 B:對, 她確實看了桌子。 a.小李看了桌子。 b.小李看了書櫃。 c.小李看了床。 d.小李看了椅子。</p>
19	<p>A:公園裡有玉蘭樹、櫻花樹、桃樹, 我猜玉蘭樹和桃樹開花了。 B:不對, _/只有/還有/偏偏櫻花樹開花了。 a.櫻花樹開花了。 b.梨樹開花了。</p>

	<p>c.玉蘭樹開花了。 d.桃樹開花了。</p>
20	<p>A:商店裡有襯衫、褲子以及夾克。我猜小李買了襯衫和褲子。 B:不對，他_/只/還/偏偏買了夾克。 a.小李買了褲子。 b.小李買了襯衫。 c.小李買了夾克。 d.小李買了毛衣。</p>
21	<p>A:王軒、張明、劉博文都去買鞋了。我猜劉博文和王軒買了運動鞋。 B:是嗎？好像張明買了運動鞋。 a.張明買了運動鞋。 b.王軒買了運動鞋。 c.劉博文買了運動鞋。 d.林彥華買了運動鞋。</p>
22	<p>A:王軒、張明、劉博文都準備參加小李生日聚會。我猜小李邀請了張明和王軒。 B:是嗎？小李好像邀請了劉博文。 a.小李邀請了王軒。 b.小李邀請了劉博文。 c.小李邀請了張明。 d.小李邀請了林彥華。</p>
23	<p>A:王軒、張明、劉博文都去錄節目了。我猜主持人提問了劉博文和張明。 B:不對，主持人_/只/還/偏偏提問了王軒。 a.主持人提問了王軒。 b.主持人提問了劉博文。 c.主持人提問了張明。 d.主持人提問了林彥華。</p>
24	<p>A:王軒、張明、劉博文都送了娜娜生日禮物。我猜王軒和張明喜歡娜娜。 B:不對，_/只有/還有/偏偏劉博文喜歡娜娜。 a.劉博文喜歡娜娜。 b.王軒喜歡娜娜。 c.張明喜歡娜娜。 d.林彥華喜歡娜娜。</p>
25	<p>A:王軒、張明、劉博文都得罪了老闆。我猜老闆開除了王軒和張明。 B:不對，老闆_/只/還/偏偏開除了劉博文。 a.老闆開除了王軒。 b.老闆開除了張明。 c.老闆開除了劉博文。 d.老闆開除了林彥華。</p>

26	<p>A:工業區有玩具廠、機械廠、電子廠。我猜玩具廠和機械廠倒閉了。</p> <p>B:對，機械廠確實倒閉了。</p> <p>a.電子廠倒閉了。</p> <p>b.機械廠倒閉了。</p> <p>c.玩具廠倒閉了。</p> <p>d.造紙廠倒閉了。</p>
27	<p>A:淘汰的有泰國隊、阿曼隊、日本隊，我猜阿曼隊和日本隊打假球。</p> <p>B:不對，_/只有/還有/偏偏泰國隊打假球。</p> <p>a.阿曼隊打假球。</p> <p>b.日本隊打假球。</p> <p>c.韓國隊打假球。</p> <p>d.泰國隊打假球。</p>
28	<p>A:首飾盒里有項鍊、戒指以及耳環。我猜小李戴了項鍊和耳環。</p> <p>B:不對，她_/只/還/偏偏戴了戒指。</p> <p>a.小李戴了戒指。</p> <p>b.小李戴了項鍊。</p> <p>c.小李戴了耳環。</p> <p>d.小李戴了手錶。</p>
29	<p>A:客廳里有百合、康乃馨、玫瑰。我猜康乃馨和玫瑰枯萎了。</p> <p>B:對，康乃馨確實枯萎了。</p> <p>a.玫瑰枯萎了。</p> <p>b.百合枯萎了。</p> <p>c.鬱金香枯萎了。</p> <p>d.康乃馨枯萎了。</p>
30	<p>A:洗衣籃里有襪子、襯衫和裙子。我猜小李洗了裙子和襪子。</p> <p>B:是嗎？她好像洗了襯衫。</p> <p>a.小李洗了襯衫。</p> <p>b.小李洗了襪子。</p> <p>c.小李洗了裙子。</p> <p>d.小李洗了毛衣。</p>
31	<p>A:動物園裡有斑馬、獅子以及大象。我猜小李拍了斑馬和獅子的照片。</p> <p>B:不對，他_/只/還/偏偏拍了大象。</p> <p>a.小李拍了大象。</p> <p>b.小李拍了斑馬。</p> <p>c.小李拍了獅子。</p> <p>d.小李拍了孔雀。</p>
32	<p>A:街上有飯店、咖啡店、甜品店，我猜飯店和咖啡店開門了。</p> <p>B:不對，_/只有/還有/偏偏甜品店開門了。</p> <p>a.甜品店開門了。</p> <p>b.花店開門了。</p>

	<p>c.咖啡店開門了。 d.書店開門了。</p>
33	<p>A:玩具店裡有積木、小汽車、洋娃娃。我猜小汽車和洋娃娃賣完了。 B:不對，_/只有/還有/偏偏積木賣完了。 a.洋娃娃賣完了。 b.積木賣完了。 c.小汽車賣完了。 d.遙控飛機賣完了。</p>
34	<p>A:王軒、張明、劉博文都去練長跑了。我猜教練表揚了張明和王軒。 B:對，教練確實表揚了王軒。 a.教練表揚了劉博文。 b.教練表揚了王軒。 c.教練表揚了林彥華。 d.教練表揚了張明。</p>
35	<p>A:廚房水槽里有碗、鍋以及盤子。我猜小李洗了鍋和碗。 B:對，她確實洗了鍋。 a.小李洗了鍋。 b.小李洗了碗。 c.小李洗了盤子。 d.小李洗了杯子。</p>
36	<p>A:超市裡有麵包、雞蛋和牛奶。我猜小李買了雞蛋和牛奶。 B:是嗎？她好像買了麵包。 a.小李買了麵包。 b.小李買了雞蛋。 c.小李買了牛奶。 d.小李買了黃油。</p>
37	<p>A:王軒、張明、劉博文都逃課了。我猜老師批評了劉博文和王軒。 B:不對，老師_/只/還/偏偏批評了張明。 a.老師批評了劉博文。 b.老師批評了王軒。 c.老師批評了林彥華。 d.老師批評了張明。</p>
38	<p>A:王軒、張明、劉博文都去音樂教室了。我猜張明和王軒練習了小提琴。 B:不對，_/只有/還有/偏偏劉博文練習了小提琴。 a.劉博文練習了小提琴。 b.王軒練習了小提琴。 c.張明練習了小提琴。 d.林彥華練習了小提琴。</p>
39	<p>A:王軒、張明、劉博文都參加面試了。我猜張明和劉博文通過了。 B:不對，_/只有/還有/偏偏王軒通過了。</p>

	<p>a.王軒通過了面試。 b.張明通過了面試。 c.劉博文通過了面試。 d.林彥華通過了面試。</p>
40	<p>A:餐廳里有漢堡、薯條、雞翅。我猜漢堡和薯條打折了。 B:是嗎?好像雞翅打折了。 a.薯條打折了。 b.蘋果派打折了。 c.漢堡打折了。 d.雞翅打折了。</p>
41	<p>A:王軒、張明、劉博文都去買飲料了。我猜張明和王軒買了可樂。 B:對,確實張明買了可樂。 a.張明買了可樂。 b.王軒買了可樂。 c.劉博文買了可樂。 d.林彥華買了可樂。</p>
42	<p>A:王軒、張明、劉博文都去吃西餐了。我猜張明和王軒吃了牛排。 B:是嗎?好像劉博文吃了牛排。 a.劉博文吃了牛排。 b.王軒吃了牛排。 c.張明吃了牛排。 d.林彥華吃了牛排。</p>
43	<p>A:王軒、張明、劉博文都報了電影學院。我猜電影學院錄取了王軒和劉博文。 B:不對,電影學院_/只/還/偏偏錄取了張明。 a.電影學院錄取了劉博文。 b.電影學院錄取了林彥華。 c.電影學院錄取了張明。 d.電影學院錄取了王軒。</p>
44	<p>A:王軒、張明、劉博文都去敬老院做義工了。我猜劉博文和王軒打掃衛生了。 B:不對, _/只有/還有/偏偏張明打掃衛生了。 a.張明打掃衛生了。 b.王軒打掃衛生了。 c.劉博文打掃衛生了。 d.林彥華打掃衛生了。</p>
45	<p>A:王軒、張明、劉博文都去參加合唱團的選拔了。我猜合唱團選了劉博文和張明。 B:不對,合唱團只選了_/只/還/偏偏王軒。 a.合唱團選了張明。 b.合唱團選了王軒。 c.合唱團選了林彥華。 d.合唱團選了劉博文。</p>

46	<p>A:衣櫃里有皮包、圍巾以及帽子。我猜小李拿出了圍巾和帽子。</p> <p>B:是嗎？她好像拿出了皮包。</p> <p>a.小李拿出了皮包。</p> <p>b.小李拿出了圍巾。</p> <p>c.小李拿出了帽子。</p> <p>d.小李拿出了腰帶。</p>
47	<p>A:餐桌上有糖、餅乾以及巧克力。我猜小李吃了巧克力和糖。</p> <p>B:對，他確實吃了巧克力。</p> <p>a.小李吃了巧克力。</p> <p>b.小李吃了糖。</p> <p>c.小李吃了餅乾。</p> <p>d.小李吃了果凍。</p>
48	<p>A:王軒、張明、劉博文都去見校長了。我猜校長罵了王軒和劉博文。</p> <p>B:對，校長確實罵了劉博文。</p> <p>a.校長罵了林彥華。</p> <p>b.校長罵了張明。</p> <p>c.校長罵了王軒。</p> <p>d.校長罵了劉博文。</p>

Appendix II. Stimuli of Experiment 2

(Presented to participants in 2 lists)

List 1

1	水果盤里有桃子、梨、蘋果，小李偏偏吃了桃子。 (a).小李吃了桃子。 (b).小李吃了蘋果。
2	王軒、張明、劉博文都在電腦室，偏偏張明打遊戲了。 (a).劉博文打遊戲了。 (b).張明打遊戲了。
3	公園裡有不少樹，偏偏櫻花樹開花了。 (a).除了櫻花樹以外，還有別的樹也開花了。 (b).櫻花樹開花了。
4	工業區有玩具廠、機械廠、電子廠，偏偏電子廠破產了。 (a).玩具廠破產了。 (b).電子廠破產了。
5	有不少人去錄節目了，主持人偏偏提問了小李。 (a).除了小李以外，主持人還提問了別的人。 (b).主持人提問了小李。
6	商店裡有襯衫、夾克、褲子，小李偏偏買了夾克。 (a).小李買了褲子。 (b).小李買了夾克。
7	王軒、張明、劉博文參加面試了，偏偏王軒通過了。 (a).王軒通過了面試。 (b).劉博文通過了面試。
8	學校有很多研究生報考了外交部，外交部偏偏錄取了小李。 (a).外交部錄取了小李。 (b).除了小李以外，外交部還錄取了別的研究生。
9	首飾盒里有很多首飾，小李偏偏戴了戒指。 (a).除了戒指以外，小李還戴了別的首飾。 (b).小李戴了戒指。
10	王軒、張明、劉博文得罪了老闆，老闆偏偏開除了劉博文。 (a).老闆開除了劉博文。 (b).老闆開除了張明。
11	有二十幾位同學去音樂教室了，偏偏小李練習了小提琴。 (a).小李練習了小提琴。 (b).除了小李以外，還有別的同学也練習了小提琴。
12	電視台有二十幾種節目，偏偏美食節目停播了。 (a).美食節目停播了。 (b).除了美食節目以外，還有別的節目也停播了。
13	有二十幾個五年級學生參加了合唱團的選拔，合唱團錄用了小李。 (a).合唱團錄用了小李。 (b).除了小李以外，合唱團還錄用了別的五年級學生。

14	<p>王軒、張明、劉博文逃課了，老師批評了張明。</p> <p>(a).老師批評了王軒。</p> <p>(b).老師批評了張明。</p>
15	<p>王軒、張明、劉博文在同一家公司上班，經理器重王軒。</p> <p>(a).經理器重張明。</p> <p>(b).經理器重王軒。</p>
16	<p>動物園裡有斑馬、獅子、大象，小李拍了大象的照片。</p> <p>(a).小李拍了大象。</p> <p>(b).小李拍了斑馬。</p>
17	<p>陽台上有十幾盆綠植，小李挪動了仙人掌。</p> <p>(a).除了仙人掌以外，小李還挪動了別的綠植。</p> <p>(b).小李挪動了仙人掌。</p>
18	<p>王軒、張明、劉博文都送了娜娜禮物，劉博文送了變形金剛。</p> <p>(a).王軒送了變形金剛。</p> <p>(b).劉博文送了變形金剛。</p>
19	<p>有很多同學週末出去玩了，小李去了八達嶺。</p> <p>(a).小李去了八達嶺。</p> <p>(b).除了小李以外，還有別的同学也去了八達嶺。</p>
20	<p>玩具店裡有洋娃娃、積木、小汽車，積木漲價了。</p> <p>(a).小汽車漲價了。</p> <p>(b).積木漲價了。</p>
21	<p>體育中心有游泳班、太極班、網球班，太極班滿員了。</p> <p>(a).游泳班滿員了。</p> <p>(b).太極班滿員了。</p>
22	<p>街上有不少店鋪，咖啡店開門了。</p> <p>(a).咖啡店開門了。</p> <p>(b).除了咖啡店以外，還有別的店也開門了。</p>
23	<p>很多同學都去敬老院做義工了，張明打掃衛生了。</p> <p>(a).張明打掃衛生了。</p> <p>(b).除了張明，還有別的同学也打掃衛生了。</p>
24	<p>盒子里有不少文具，小李拿走了鉛筆。</p> <p>(a).除了鉛筆以外，小李還拿走了別的文具。</p> <p>(b).小李拿走了鉛筆。</p>

List 2

1	有二十幾個五年級學生參加了合唱團的選拔，合唱團偏偏錄用了小李。 (a).合唱團錄用了小李。 (b).除了小李以外，合唱團還錄用了別的五年級學生。
2	王軒、張明、劉博文逃課了，老師偏偏批評了張明。 (a).老師批評了王軒。 (b).老師批評了張明。
3	王軒、張明、劉博文在同一家公司上班，經理偏偏器重王軒。 (a).經理器重張明。 (b).經理器重王軒。
4	動物園裡有斑馬、獅子、大象，小李偏偏拍了大象的照片。 (a).小李拍了大象。 (b).小李拍了斑馬。
5	陽台上有十幾盆綠植，小李偏偏挪動了仙人掌。 (a).除了仙人掌以外，小李還挪動了別的綠植。 (b).小李挪動了仙人掌。
6	王軒、張明、劉博文都送了娜娜禮物，偏偏劉博文送了變形金剛。 (a).王軒送了變形金剛。 (b).劉博文送了變形金剛。
7	有很多同學週末出去玩，偏偏小李去了八達嶺。 (a).小李去了八達嶺。 (b).除了小李以外，還有別同學也去了八達嶺。
8	玩具店裡有洋娃娃、積木、小汽車，偏偏積木漲價了。 (a).小汽車漲價了。 (b).積木漲價了。
9	體育中心有游泳班、太極班、網球班，偏偏太極班滿員了。 (a).游泳班滿員了。 (b).太極班滿員了。
10	街上有不少店鋪，偏偏咖啡店開門了。 (a).咖啡店開門了。 (b).除了咖啡店以外，還有別的店也開門了。
11	很多同學都去敬老院做義工了，偏偏張明打掃衛生了。 (a).張明打掃衛生了。 (b).除了張明，還有別同學也打掃衛生了。
12	盒子里有不少文具，小李偏偏拿走了鉛筆。 (a).除了鉛筆以外，小李還拿走了別的文具。 (b).小李拿走了鉛筆。
13	水果盤里有桃子、梨、蘋果，小李吃了桃子。 (a).小李吃了桃子。 (b).小李吃了蘋果。
14	王軒、張明、劉博文都在電腦室，張明打遊戲了。 (a).劉博文打遊戲了。

	(b).張明打遊戲了。
15	公園裡有不少樹，櫻花樹開花了。 (a).除了櫻花樹以外，還有別的樹也開花了。 (b).櫻花樹開花了。
16	工業區有玩具廠、機械廠、電子廠，電子廠破產了。 (a).玩具廠破產了。 (b).電子廠破產了。
17	有不少人去錄節目了，主持人提問了小李。 (a).除了小李以外，主持人還提問了別的人。 (b).主持人提問了小李。
18	商店裡有襯衫、夾克、褲子，小李買了夾克。 (a).小李買了褲子。 (b).小李買了夾克。
19	王軒、張明、劉博文參加面試了，王軒通過了。 (a).王軒通過了面試。 (b).劉博文通過了面試。
20	學校有很多研究生報考了外交部，外交部錄取了小李。 (a).外交部錄取了小李。 (b).除了小李以外，外交部還錄取了別的研究生。
21	首飾盒里有很多首飾，小李戴了戒指。 (a).除了戒指以外，小李還戴了別的首飾。 (b).小李戴了戒指。
22	王軒、張明、劉博文得罪了老闆，老闆開除了劉博文。 (a).老闆開除了劉博文。 (b).老闆開除了張明。
23	有二十幾位同學去音樂教室了，小李練習了小提琴。 (a).小李練習了小提琴。 (b).除了小李以外，還有別的同学也練習了小提琴。
24	電視台有二十幾種節目，美食節目停播了。 (a).美食節目停播了。 (b).除了美食節目以外，還有別的節目也停播了。

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