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LEXICAL TRIGGERS FOR IMPLICIT CONTRASTIVE PROPOSITIONS
—— THE CASES OF MANDARIN *BENLAI*, *DA+NP+DE* AND OTHERS

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Lexical Triggers for Implicit Contrastive Propositions ——The Cases of Mandarin *Benlai*, *Da+NP+de* and Others

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(signed)

ZHANG Xue

Abstract

This dissertation proposed a theory of Contrastive Proposition Structure in Chinese Mandarin. Based on the investigation of the main contributions of semantical propositions, such as entailment, presupposition and implicature, the assumptions of the Proposition Structure were identified. The main sub-issues studied were: (1) the formalization of the structure, (2) the semantic and syntactic properties of the proposition structure, (3) the different types of triggers and the functions they demonstrate in the structure, and (4) the inter-propositional relations between various constituents.

A detailed analysis of two triggers was provided. First, the adverbial *benlai* is an instance of a bare lexical item trigger. *Benlai* triggers an implicit proposition which contributes a formal structure with the well-formed proposition. According to the theory of T&P Property (Dahl, 1981; Declerck, 1989; Depraetere, 1995), the classification of inter-propositional relations was clarified. The essential relationship under investigation was demonstrating the natures of contrast. Based on this knowledge,

the issues of the constraints of contrast and the comparison of contrast (Alatis, 1968; Fisiak, 1991; James, 1980; Krzeszowski, 1990; Nehls, 1979) and negation (Gazdar, 1979; Haegeman, 1995; Thompson, Longacre&Hwang, 1985) were discussed briefly. Furthermore, the adverbial *yuanlai* was studied as well. The adverbial *benlai* is an implicit contrastive proposition structure trigger, while *yuanlai* is a pure time clause marker.

The second example of a trigger was a construction trigger. *Da+NP+de* has always been treated as a conventional idiom in previous studies. In this dissertation, I investigated the different categories of the readings from *Da+NP+de* construction. Within the framework of Fuzzy Set Theory (Klaua, 1965; Klir & Yuan, 1995; Zadeh, 1965, 1972), the semantic and syntactic properties of *Da+NP+de* were illustrated. Meanwhile, the constraints of the time NP and the follow-up proposition indicated the formalization of the entire structure. The relationship between convention (Lewis, 1969; Strawson, 1964) and non-convention was primarily researched. The contrastive pattern built for *Da+NP+de* was compatible with the *benlai* case. Based on this analysis, the notion and features of Implicit Contrastive Proposition Structure and its triggers was proposed.

To reinforce this theory, the other two structure triggers *genben* and *zhishao* were introduced as well. The contrastive feature is a necessary requirement for the Implicit Proposition Structure in Chinese cases and this acknowledgement may contribute to a fresh perspective on the investigation of partial Chinese adverbials and formal constructions.

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Finally, this dissertation is for my parents.

Table of Contents

List of Abbreviations

AP   *Assertive Proposition*

BP   *Background Proposition*

CL   *Classifier*

CP   *Contrastive Proposition*

CPS   *Contrastive Proposition Structure*

DND   *Da+NP+de Construction*

FP   *Follow-Up Proposition*

FST   *Fuzzy Set Theory*

IP   *Inner Proposition*

OLR   *Opposite Lexical Theory*

OP   *Outer Proposition*

Pfv.   *The Perfective Marker*

PP   *Possible Proposition*

Prc.   *Particle*

Prg.   *The Progressive Marker*

SP   *Supplementary Proposition*

SFP   *Sentence Final Particle*

Chapter 1 Introduction

1.1 Research Objectives

This dissertation sought to examine the relations between triggers and meanings of propositions. Based on the semantical investigation of Chinese adverbials and constructions, a hypothesis about the implicit proposition was proposed. In this dissertation, the issues analyzed included the following:

(1) The theoretical foundation of the hypothesis.

(2) Detailed investigations of provided examples.

(3) The pattern and property of the hypothetical objective in both syntax and semantics accounts.

(4) The range of application for the new theory.

1.2 Overview of the Dissertation

This dissertation includes six chapters. In Chapter 1, the objectives of this research are outlined. Chapter 2 presents a critical literature review of the three main existing implicit propositions. Based on the observation of their notions, the

theoretical foundation of the proposed implicit Contrastive Proposition Structure (CPS) is established. Chapters 3 and 4 present a demonstrative intensive study of two triggers, *benlai* and *Da+NP+de*. By discussing the functions and properties of these two triggers, the basic pattern of implicit CPS is illustrated. In Chapter 5, two more adverbial triggers are briefly discussed, *genben* and *zhishao*. According to the functioning mechanism of these triggers, the range of application of this theory is explored. Finally in Chapter 6, the basic notion and properties of the implicit CPS is provided as a conclusion.

Chapter 2 Theoretical Foundation

This chapter provides a critical literature review. Based on the main issue being discussing is this dissertation, the propositions in utterance which have been triggered were the main focus. The hypothesis of CPS led to a new category of propositions in the semantic and pragmatic accounts. Hence, a brief review of studies on typical semantically triggered proposition(s) was provided first, including entailment, presupposition and implicature.

This dissertation sought to demonstrate what an implicit proposition can do in the utterance. In this regard, an illustration of the core function and property of these three existing concepts was provided as well as a comparison between them. Their contributions for mutual understanding in a conversation and their relations with the trigger elements were also discussed. Furthermore, a different type of proposition emerged within the framework of the CPS hypothesis.

Therefore, the discussion of the inter-propositional relations is inevitable. In the analysis of cases in this dissertation, I am

convinced that the propositions in the hypothesized structure are negatively / contrastively related. In section 3.3, when the adverb *benlai* is discussed, a detailed illustration of the differentiations between negation and contrast, and a brief introduction of the concept and features for both negative and contrastive relations is provided; hence the related issue will not be demonstrated in this chapter.

In section 1, the core notions of entailment, presupposition and implicature are introduced briefly. Since the aim is the essential definition only, the issues of classification or other controversial topics of these three concepts will not be included here. In section 2, these three concepts are compared to reveal the possible contributions from a proposition to the utterance. Based on these, the hypothesis of implicit contrastive proposition is discussed.

2.1 Three Semantics Propositions

2.1.1 Entailment

Technically, entailment (||-) is not just a proposition; it is the relationship between two propositions. If the truth of sentence A

ensures the truth of sentence B, then sentence B is the entailment of sentence A, also called strict implication. For example,

(2-1) *Jim killed John.*

(2-2) *John is dead.*

(2-1) *Jim killed John.*   ‖-   (2-2) *John is dead.*

Sentence (2-1) entails sentence (2-2); sentence (2-2) is the entailment of sentence (2-1). The truth of (2-1) forces the truth of (2-2). If sentence (2-1) is not true, then entailment (2-2) cannot remain.

* (2-1a) *Jim did not kill John.*   ‖-   (2-2) *John is dead.*

The essential purpose of the entailment is to demonstrate the relation between sentences. This relation is normally allowed on the basis of constituent meanings (Seuren, 1998), just like the meaning of "murder" ensures the meaning of "dead" in sentences (2-1) and (2-2). Moreover, the necessary logical consequence can indicate an entailment (Brinton, 2000), as the sentences below illustrate:

(2-3) *Lily is living in New York.*

(2-4) *Lily is living in America.*

(2-3) *Lily is living in New York.* ‖- (2-4) *Lily is living in America.*

(2-5) *Sherlock and John went to the party.*

(2-6) *Sherlock went to the party.*

(2-5) *Sherlock and John went to the party.*   ‖-

(2-6) *Sherlock went to the party.*

Stated another way, the mechanism contributing to the entailment heavily relies on the lexical meaning of some particular constituents in the sentences or common sense.

2.1.2 Presupposition

When people communicate, they normally take a lot for granted. In other words, they presuppose information. Generally, we can say that a presupposition (Kiparsky&Kiparsky, 1970; Russell, 1905; Strawson, 1950) is background belief which should be mutually known or assumed by the speaker and addressee for the utterance to be considered appropriate in a context. For a typical presupposition, a necessary assumption is whether the utterance is in the form of an assertion, denial, or question. Moreover it can

be associated with a specific lexical item or grammatical feature (presupposition trigger) in the utterance. Since the relation between utterance and presupposition is quite strict, there are even some opinions regarding treating the presupposition as a relation between the speaker and a proposition (Yule, 1980).

For example, the utterance:

(2-7) *John regrets that he stopped doing linguistics before he left Cambridge.*

has the following presuppositions (Levinson, 1983):

(2-8) *There is someone uniquely identifiable to the speaker and addressee as John.*

(2-9) *John stopped doing linguistics before he left Cambridge.*

(2-10) *John was doing linguistics before he left Cambridge.*

(2-11) *John left Cambridge.*

(2-12) *John had been at Cambridge.*

There are three significant properties of presuppositions (Caton, 1981; Crystal, 1980; Levinson, 1983; Talmy, 1985) which require

more attention. These features are related to the discussion of the comparison of the notions later.

(1) *It must be mutually known by the speaker and addressee.*

(2) *It will remain under the negation or question.*

(3) *It will generally be associated with a presupposition trigger (a specific lexical item or grammatical feature).*

For the presupposition triggers which signal the existence of a presupposition in the utterance, the following are some instances (Levinson, 1983):

➢ *Factive verbs: realize, know, regret*

➢ *Implicative verb: manage, avoid, intend*

➢ *Change of state verbs: arrive, enter, leave*

➢ *Expressions of repetition: return, again, restore*

➢ *Expressions of temporal relations: during, before, after*

Based on this observation, the presupposition trigger is triggering the presupposition on the basis of its lexical meaning. In other words, the readings and the logical relations of presupposition triggers can be obtained by a literal understanding. The

presupposition information is not a new contribution to the understanding of the triggers.

When a proposition is implying an implicit reading, the concept of presupposition is always a popular choice. While this requires further clarification, in my opinion, presupposition is not the purpose of communication. The necessary mutually understood background information may be treated as a presupposition, and if the implicit meaning which a proposition is implying is just what this proposition is trying to newly convey, the presupposition is rarely a good interpretation.

2.1.3 Implicature

An implicature is something that is inferred from an utterance but is not a condition for the truth of the utterance (Gazdar, 1979; Levinson, 1983). For example,

(2-13) *Some of the boys were at the party. (Gazdar, 1979)*
Implicature: Not all of the boys were at the party.

The concept of implicature was proposed by Grice (1975). First of all, two things must be known: the cooperative principles and

the conversational maxim. The cooperative principle is a principle of conversation that was proposed by Grice (1975), stating that the utterance participants expect is that each will make a *"conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange"* (Grice, 1975). The cooperative principle, associated with conversational maxims, is contributing to the conversational implicatures in some way.

The utterance participants assume that a speaker is being cooperative, and thus they make conversational implicatures about what is said. When a speaker makes an apparently uninformative remark such as *"War is war,"* the addressee assumes that the speaker is being cooperative and looks for the implicature the speaker is proposing.

A conversational maxim comprises the four rules below which were proposed by Grice. The maxim states that a speaker is assumed to make a contribution in the conversation. When there is any violation, the implicature will be generally expected.

➢ *quantity maxim*

➢ *quality maxim*

➢ *maxim of relation or relevance*

➢ *maxim of manner*

There are a number of issues for implicature which are still controversial, for instance the issue of the classification of implicature. Grice (1975) claimed that there were two types of implicatures: conventional and conversational. The former arises solely because of conventional features of the words employed in an utterance. The latter arises from the maxims of the conversation rules. There are many studies discussing the issue of the typology of implicature (Gazdar, 1979; Grice, 1975; Karttunnen & Peters, 1976; among others). Since this dissertation is not a theory development thesis, the focus on implicature only concerns the core notion, and not on the implicature type issue. In short, I agree that the conversational implicature is a typical implicature while the conventional implicature is more like a presupposition in some ways because it is always triggered by the lexical meaning of a particular word or some logical relations.

Grice (1975) listed several criteria for the classification of an implicature to be considered as a conversational implicature rather than conventional (Gazdar, 1979). Based on the discussion above, it seems more important to distinguish implicature from presupposition.

(a) *It must not be part of the meaning of the expression to which it attaches. That is it must not be given in the lexicon or specified as the meaning-changing effect of some syntactic operation.*

(b) *It must be context-sensitive and cancelable in particular cases, either by the context making it clear that it is inapplicable or by the addition of a clause denying the implicature.*

I hold the opinion that cancellability is the essential character of implicature. Hence implicature is context-sensitive, the interpretations of an implicature which a proposition is proposing are not unaltered. In other words, any implicature can be canceled or changed by a context revising process.

2.2 The Hypothesis of Proposition Structure

2.2.1 The Relations of Three Notions

Based on the brief introduction of the core definitions and main properties of the three concepts, the relations between them were investigated. Firstly, for entailment and presupposition, they share quite a lot in common. Both of them are essential relations between two propositions, meaning that the entailment and presupposition are related with the utterance with some kind of logical connection. Therefore they generally arise on the basis of triggers. Moreover, the interpretation of the sentence information relies on the lexical meaning of a trigger or the logical relation conveyed by the trigger.

The Common Shared Elements of Entailment and Presupposition

[+ Trigger]
[+ Lexical Meaning]
[+ Logical Relation]

Even though they share elements in common, they can still be separated from each other. A basic test to differentiate presupposition from entailment is negation. Presupposition remains under negation, while entailment does not as the sentences groups below illustrate.

(2-1) *Jim killed John.*   ‖-   (2-2) *John is dead.*

* (2-1a) *Jim did not kill John.*   ‖-   (2-2) *John is dead.*

(2-14) *He is living with his wife.*   >>   (2-15) *He has a wife.*

(2-14a) *He is not living with his wife.* >>   (2-15) *He has a wife.*

As mentioned earlier, both entailment and presupposition obtain their propositional relation by the lexical meaning or logical features of a trigger while the basis of demonstration is different. Entailment focuses on the utterance itself, hence the meaning of a trigger which entailment achieves highly relies on the context. Hence entailment cannot remain under negation or question.

For presupposition, the function is based on cognition, logic, common sense, instead of the context. Therefore someone can treat the presupposition as a relation between the speaker him/herself and the proposition. Presupposition is a background belief and this belief has been established before the utterance is even formalized. Thus the different forms of utterance (negation or question) will not influence the presupposition.

Compared with entailment and presupposition, implicature is rarely classified as a relation between two propositions. There is

technically no specific trigger for implicature. Considering the relations between implicature and the coordination maxims, implicature is more like a deduction. According to the facts that implicature does not co-ordinate with any trigger, it is ensured that the meaning of implicature is not based on any lexical item meaning or logical feature.

According to the knowledge that the meaning of implicature does not contribute to any trigger, a method to differentiate implicature from entailment and presupposition has been proposed, which is cancellation. Since the information from implicature is not required by the utterance, the implicature can be canceled by adding a suspender clause.

(2-15) *She has a child, I think she is married.*

(2-16) *She has a child, but she is not married.*

Sentence (2-15) is the utterance with an implicature (*she is married*). However, in sentence (2-16), the implicature has been canceled. Neither entailment nor presupposition can be canceled.

(2-3) *Lily is living in New York. ||- (2-4) Lily is living in America.*

(2-4a) *??? Lily is living in New York, in fact, Lily is not living in America.*

(2-14) *He is living with his wife.*   >>   (2-15) *He has a wife.*

(2-15a) *??? He is living with his wife, in fact, he doesn't have a wife.*

2.2.2 What Can A Proposition Do?

Based on the comparison provided above, the following significant issue is discussed: what can a proposition do in the utterance? The entailment and presupposition are based on the trigger (lexicon or structure). The trigger contributes the well-known lexical meaning or logical relation to these implicit propositions. Therefore entailment and presupposition demonstrate information which is not new but uncontroversial. Or we may say entailment and presupposition are semantically triggered. As for implicature, even though the information provided by the implicature is new and not derived from well-known trigger reading, the information itself is not

uncontroversial. It is highly context-sensitive and unstable, hence the implicature can be canceled.

By "uncontroversial," I am referring to the information which is not cancelable in the utterance in any circumstances. "Uncontroversial" information should be attained with no condition or cooperation. According to this "uncontroversial" property and "trigger-sensitive" or "lexicon-sensitive" property, all the implicit propositions can be classified as shown below.

Property		Example	
Uncontroversial	*Lexicon-Sensitive*		
+	+	*+ context*	*Entailment*
		- context	*Presupposition*
+	—	*Hypothesis ???*	
—	+		
—	—	*implicature*	

According to these observations, most of the implicit semantic propositions can be expressed by feature checking [+/-Uncontroversial] and [+/- Lexicon-Sensitive]. While the type with the feature [+Lexicon-Sensitive, -Uncontroversial] is impossible to exist (which means if a proposition is established by the lexicon meaning or logic, it cannot be controversial then), the other three types can exist. Thus far, two of them are filled by the concepts of entailment, presupposition and implicature.

Therefore, a new type of implicit proposition with the feature [-Lexicon-Sensitive, +Uncontroversial] emerges. This means this type of implicit proposition is conveying the essential and necessary uncontroversial information while the information is not being demonstrated by the lexical reading literally or by any logical relation. But at the same time, this new proposition doesn't come from nowhere. It is triggered by some particular markers also, but the relation between the meaning of marker and proposition itself is too vague to specify. Hence we may declaim that this proposition is syntactically triggered, while entailment and presupposition are semantically triggered.

	implicature	entailment	presupposition	hypothesis
	—	+	+	+
Trigger-sensitive *Semantically-triggered*		+	+	—
Syntactically-triggered		—	—	+

Here, I am convinced that the theoretical support of this hypothesis has been obtained. Therefore, in this dissertation, I discuss this new type of implicit proposition and its inter-propositional relations in the utterance.

Chapter 3 *Benlai* and the like

In this chapter, I provide a detailed analysis of the adverbial *Benlai*. In section 1, a brief critical literature review is given, and a hypothesis for CPS is provided. Based on this concept, the relations between various propositions inside the structure are carefully demonstrated in sections 2 and 3. Also, a fresh and more precise perspective of the meaning of *Benlai* and the categories of its readings are revealed. In section 3, the constraint conditions of contrastive relations are discussed briefly as well. Finally at the end of this chapter, in sections 4 and 5, I provide a primary look at the other two objects *Yuanlai* and *Benlai-Jiu*, which are closely related to *Benlai* and are not to be ignored.

3.1 *Benlai* as a CPS Trigger

3.1.1 Literature Review

In general, all the previous works have noticed the reading of negation/contrast/contradiction *benlai* conveying more or less. The arguments have revolved around what this proposition is and how *benlai* indicates it (Bai, 2010; Fan, 2001; Mao, Lu, & Huaying, 2008; Tao, 2000; Wu & Kuo, 2012; Zhang, 2006; Zhao,

2007).

Tao (2000) holds the opinion that "*benlai* entails a presupposition, i.e. The current state of affairs contradicts what is supposed to be" (Tao, 2000). Although I agree that there is a proposition which is not explicitly stated by *benlai*, I am questioning if it is a presupposition or not. Based on the core definition of presupposition discussed earlier, it should remain under the negation of the original sentence. For the *benlai* case, when the well-formed proposition gets negated, the un-explicit stated proposition I am focusing on cannot remain. It will be negated as well. Hence, to classify this proposition as a presupposition is still debatable.

Some other works avoided the issue of classification of the implicit proposition *benlai* indicates by focusing on the interpretation of the meanings. Zhang (2006), Zhao (2007) and Bai (2010) made the observation that *benlai* means "what is supposed to be, based on senses." While there is a problem, the event which *benlai* marks is an event that truly happened or just a prediction or supposed assumption. According to their explanation, the event should be the assumption or expectation

which has not happened yet. However, there are a large number of sentences that the proposition *benlai* marks as indicating reality. Thus the issue of the classifications of events in *benlai* propositions has not been analyzed satisfyingly.

Fan (2001) and Zhao (2007) noticed the interesting structure of *benlai-jiu.* They proposed that *benlai-jiu* indicates an increase of degree. This observation can explain some sentences of *benlai-jiu*, while there are other sentences in which it is really difficult to obtain the "increase of degree" reading. Not every sentence is about gradability when *benlai-jiu* is used. Meanwhile, the relationship between bare adverbial *benlai* and construction *benlai-jiu* has not been discussed yet. Does *benlai-jiu* maintain the main properties of *benlai* or is it demonstrating a different picture? These questions still need to be addressed.

Wu and Kuo's (2012) work, compared with others, presents a considerable improvement. They proposed a concept of "anchor time" and demonstrated the relations between time and reading of *benlai*. They believes that "as an adverbial, *benlai* sometimes has a discontinuity reading while at other times it does not" (Wu & Kuo, 2012). They argued that *benlai* shows contrast depending

on whether a proposition holds at different times. When the context does provide contrastive information, then *benlai* indicates that the proposition does not hold at the argument time and hence the sentence receives a discontinuity reading. Their observations have three problems. First, where is the contrast information from the sentence coming from? The author proposed that the adverbial *benlai* has contrastive semantic properties, while it is hard to image a situation in a sentence with *benlai* but without contrastive information. If the contrast is the core feature of *benlai*, then there should be no possibility that the discontinuity reading case ever happens. Secondly, the time issue only impacts some sentences with *benlai.* There are some examples where the proposition with *benlai* is about a habitual issue more akin to argument time. The theory of anchor time is not applicable in every circumstance. Finally, their work does not answer the question of what this contrastive information is: presupposition or entailment or something else? Also the reason for selecting the concept of contrast instead of negation or other terms has not been explained either.

Based on the contributions and problems of these previous studies, I present a detailed analysis of the semantic accounts of

benlai. The issues I propose are various, such as the relations between *benlai* and the time issue, the interpretation of contrastive information from *benlai* and its properties, and the comparison between *benlai* and *benlai-jiu,* etc.

3.1.2 CPS

Based on the review of previous works above, I argue that the adverbial *Benlai* marks a CPS. The essential opinion I hold is that not all the parts of CPS are always well-formed in the sentences, while the existence and reading of CPS are always absolute and exclusive. It will not allow for exceptional or conditional interpretations, no matter what the context is, nor the understanding preference of communicators. In short, the CPS is an obligatory projection from *benlai*. The understandings of the implicit propositions which *benlai* triggers are uncontroversial.

CPS of *benlai*
Inner Proposition + Possible Proposition + Outer Proposition + Follow-Up Proposition
Formula 3-1

Constituents of CPS

- Inner Proposition (IP): The well-formed proposition in the utterance with *benlai* as a CPS trigger.

- Possible Proposition (PP): The proposition which IP projects to a later time based on the logical relations between IP and PP.

- Outer Proposition (OP): Instead of PP, the proposition which represents the event truly happening at a later time.

- Follow-Up Proposition (FP): The proposition which is always co-occurring with IP, as a complementary remark after a comma.

From the primary definitions above, IP, PP and OP have been put forward within the framework of semantics and pragmatics, while IP[1] and FP are syntactic concepts. This means that PP and OP are the readings which the conversation involvers must obtain from *benlai*'s trigger. Meanwhile, their forms are not guaranteed. On the contrary, FP is a marker-sensitive syntactic concept to which a *benlai* and one comma may be enough to lead. The readings of FP allow for various possibilities.

<div style="border:1px solid">

Semantics CPS of *benlai*

Inner Proposition + Possible Proposition + Outer Proposition

Formula 3-2

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[1] Since IP is a well-formed proposition with a definite meaning, IP is both a semantic concept, and a syntactic concept.

<table>
<tr><td>

Syntax CPS of *benlai*

Inner Proposition (Marker) + Follow-Up Proposition

Formula 3-3

</td></tr>
</table>

Before moving further, for a better understanding, two sentences of *benlai* are given below with descriptions of its CPS.

(3-1) *Xiaoming benlai he baijiu, dan wei le pei wo, ye he ganhong le.*

Xiaoming benlai drink alcohol, but for Pfv accompany me, also drink wine Prc.

Xiaoming used to drink alcohol, but for accompanying me, he also drank wine then.

IP: *Xiaoming benlai he baijiu.* / Xiaoming used to drink alcohol.

PP: Xiaoming should keep drinking alcohol at the reference time.

OP: Xiaoming did not drink alcohol at the reference time.

FP: *He also drank wine then.* / Xiaoming drank wine at the reference time.

(3-2) *Wo benlai xihuan ta, xianzai bu xihuan le.*

I benlai like him, now not like Prc.

I originally like him, now I don't like him anymore.

IP: *Wo benlai xihuan ta.* / I originally liked him.

PP: I should keep liking him until the utterance time.

OP: I don't like him anymore at the utterance time.

FP: *Xianzai bu xihuan le.* / I don't like him anymore at the utterance time.

The inter-propositional relations are analyzed carefully in the next sections of this chapter (3.3.1). For now I provide a primary table for a better understanding of FP, since it is not a semantic concept and may have various readings.

Table of Meanings of Follow-Up Proposition:

Formed	Meaning	Acceptability	Example
FP	IP	? Violation of Maxim of Quantity. Redundant. Sometimes for emphasis.	*Wo benlai xihuan ta, hen xihuan ta.*
FP	PP	✕	**Wo benlai xihuan ta, wo*

		Violation of the basic meaning of *benlai*.	*rengran xihuan ta.*
FP	**OP**	√	*Wo benlai xihuan ta, xianzai bu xihuan le.*
FP	**Others**	√	*Wo benlai xihuan ta, xianzai xihuan ni.*

Table 3-1

In the various examples demonstrated already, *benlai* as a CPS trigger, provides a well-formed proposition (i.e. IP). IP projects a possible proposition (i.e. PP) which represents an event highly logically related with IP. *Benlai* triggers a proposition (i.e. OP) which is derived from the earlier logic link and leads to a contrast relationship between PP. In particular, as previous works noticed and I agree, is that *benlai* triggers a time line. Hence, only PP and OP can be compared semantically together since they are under the same utterance time point.
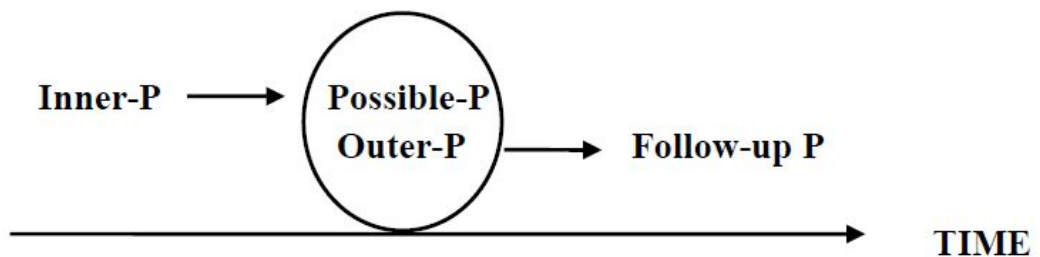
Chart 3-1

3.2 IP & PP

3.2.1 T&P Property

Before discussing the relations between IP and PP, a brief introductory background is needed. Recalling the analysis and assumption made earlier, *benlai* marks a CPS and triggers a time line. When a time line is involved, the discussion of how the verb (event) constructs itself in relation to time is inevitable, which is a lexical aspect.

In some ways, lexical aspect or aktionsart (Bache, 1982; Binnick, 1991; Comrie, 1976; Vendler, 1957; among others) is an effective tool to categorize the verbs semantically. Considering the relations between events and time, the lexical aspect provides a few significant distinctive features, such as [+/- telic] and [+/- duration]. Based on this knowledge, the concepts of T-Property & P-Property (Dahl, 1981; Declerck, 1989; Depraetere, 1995; among others) were proposed. Not just focusing on the verbs, T&P property considers the events and situations, which are essential for this discussion. Briefly, a situation has a T property when it has a known and expected telic element. And if this telic aim can be reached, the situation has a P property then.

Definitions (Dahl, 1981)

A situation has the T property if,

It leads up to a well-defined point behind which the process cannot continue.

A situation has the P property if,

It has the T property and the goal, limit, or terminal point in question or is claimed to be actually reached.

If something has the P property, it also has the T property.

In other words, the P property entails the T property.

Table of Possible Combinations (Dahl, 1981)

	Not-T	T
Not-P	I was writing.	I was writing a letter.
P	(does not occur)	I wrote a letter.

Table 3-2

3.2.2 Semantic Approaches to *benlai*

Returning to *benlai,* as the discussion indicated in section 1, IP leads to a PP based on a highly logical relationship between them. This relations between IP and PP are the essential keys to reveal the readings of CPS's logic. Meanwhile this logic connection is

significant for semantically categorizing *benlai* sentences. The clarification of categories may lead to a better understanding of *benlai* semantic features.

Considering Dahl's (1981) opinion, I agree that there are three types of events and all these types are acceptable when they co-occur with *benlai*. Since there is an interactive relationship between T and P properties, the IP has a strong logic link to lead to the PP.

- Type A   not-T & not-P
- Type B   T & not-P
- Type C   T & P

(3-3) *Wo benlai xihuan ta. (Type A)*

I benlai like him.

I used to like him.

(3-4) *Ta benlai zai xie xin. (Type B)*

He benlai Pro write letter.

He was originally writing a letter.

(3-5) *Wo benlai ba shu fang zai zheli, shu mei le. (Type C)*

I benlai ba book put at here, book gone Prc.

I originally put the book here, the book is gone.

(3-6) *Ta benlai sha le ren, jingcha meiyou zhua ta. (Type C)*

He benlai kill Pfv people, police did not arrest him.

He used to kill someone, police did not arrest him.

The 4 sentences above represent 3 types of events most likely to co-occur with *benlai*. Sentence (3-3) is Type A, which means there is no T property, nor P property. There is no expected telic element for the event. The event lasts for an unknown terminal point. Sentence (3-4) is Type B, which means there is an expected known telic, but it still has not been reached yet, and the event can keep proceeding for some time. "Writing letter" is quite different from just "writing" and the "letter" will lead to a finishing point. As for sentences (3-5) and (3-6), they are Type C. These events can have a telic element and already reached it. Hence these events will not have the feature of duration. As completed events, they will only lead to an effect or conclusion. Based on these logic links, the PP can be analyzed.

(3-3) *IP: I benlai like him.*

PP: I keep liking him.

(3-4) *IP: He benlai is writing a letter.*

PP: He keeps writing the letter until finished.

(3-5) *IP: I benlai put the book here.*

PP: The book should be here.

(3-6) *IP: He benlai killed someone.*

PP: Police should arrest him.

To summarize these three types and outline the internal logic relations better, Type A and Type B can be combined as one, since the significant distinctive feature between them and Type C is [+/- DURATION]. Both Type A sentences and Type B sentences are all discussing the events which are ongoing no matter if there is a known telic dimension or not. In contrast Type C events are the events which have already reached the telic dimension, which means there is no lasting, no duration feature. Therefore, depending on the events properties, there are two categories of IP&PP relations of *benlai* sentences.

Category 1: [+ DURATION] ([+/- T Property] & [- P Property])

Category 2: CAUSE & EFFECT ([+ T Property] & [+ P Property])

These two categories summarize the most frequently used *benlai* IPs and their logical-triggered PPs. After carefully researching

the data, there are other exceptional usages. These data demonstrate the other two categories of *benlai* propositions. First for category 3:

(3-1) *Xiaoming benlai he baijiu, dan wei le pei wo, ye he ganhong le.*

Xiaoming benlai drink alcohol, but for Pfv accompany me, also drink wine Prc.

Xiaoming used to drink alcohol, but for accompanying me, he also drank wine then.

The sentence (3-1) is not within the framework of T/P Property described above. Furthermore, this type of proposition never triggers a time line, since the event discussed is not a temporary or progressing situation, instead, the issue focused on here is a habitual event. In sentence (3-1), the event "he baijiu / drink alcohol" is a habitual event (TYPE), which means at the utterance time, the conversation involvers are predicting that "he baijiu / drinks alcohol" is happening at this time again (TOKEN). For this logical relationship between the proposition and prediction, or IP and PP, I am convinced that this is a new category.

Category 3: TYPE & TOKEN (HABITUAL RELATION)

Finally, for the fourth category, in the *benlai* proposition, there is one particular meaning item frequently combined with *benlai*. Examples include *dasuan(plan)/keyi(be able to)/you keneng(is possible)*, etc. All these items are expressing the issue of possibilities. All these types of sentences are summarized in the POSSIBILITY category.

(3-7) *Ta benlai dasuan / keyi / you keneng qu kan bisai.*

He benlai plan / be able to / be possible to go watch game.

He originally planned / was able to /thought it was possible to go to watch the game.

IP: He benlai planned to go to watch the game. (INTENTIONALITY)

He benlai was able to go to watch the game. (CAPABILITY)

He benlai was possible to go to watch the game. (POSSIBILITY)

PP*: He should go to watch the game. (PREDICTION)*

For these types of propositions, the participants in the conversation receive the information that the related event or the agent is getting the intentionality / capability / possibility to make it happen. Hence a reasonable prediction can be deducted naturally which is the PP. In this category, the logical connection between the IP and PP is summarized as POSSIBILITY & PREDICTION.

Category 4: POSSIBILITY & PREDICTION

In all the analyses above, there are four categories of logic relations between IP and PP. Meanwhile, these represent four classifications of semantical approaches to *benlai* propositions. The clarification of *benlai* semantics and pragmatics features are illustrated below.

> **Inter-propositional Relations Between IP and PP**
>
> **Category 1: [+ DURATION] ([+/- T-Property] & [- P-Property])**
>
> **Category 2: CAUSE & EFFECT ([+ T-Property] & [+ P-Property])**
>
> **Category 3: TYPE & TOKEN (HABITUAL RELATION)**
>
> **Category 4: POSSIBILITY & PREDICTION**
>
> Formula 3-4

3.3 PP & OP

In this section, I discuss the relations between PP and OP, which are essential and significant for this dissertation's hypothesis: the CPS.

3.3.1 Contrastive Relation

Regarding the definitions proposed earlier for PP and OP, they are the events under the same reference time expected to happen and which truly happened. The contradiction relation between them is the main core reading received from the trigger *benlai*. In other words, *benlai* triggers a contrastive OP which is not well-formed all the time.

- Possible Proposition (PP): The proposition which IP projects to the later time based on the logical relations between IP and PP.
- Outer Proposition (OP): Instead of PP, the proposition which represents the event truly happening at the later time.

Here the interactive situations between PP and OP are discussed carefully. This inter-propositional relation is the core issue in this dissertation. Additionally, based on this relation, the discussion of

the meaning of FP can also continue.

(3-1) *Xiaoming benlai he baijiu, dan wei le pei wo, ye he ganhong le.*

Xiaoming benlai drink alcohol, but for Pfv accompany me, also drink wine Prc.

Xiaoming used to drink alcohol, but for accompanying me, he also drank wine then.

(3-8) *Ta benlai zai zheli, bu zhidao weishenme xianzai bu zai le.*

He benlai in here, not know why now not here Prc.

He used to be here, but don't know why he is not here now.

These sentences represent two types of relations between PP and OP. In sentence (3-1), the PP is *Xiaoming* will drink alcohol at the reference event time. While the OP which was truly happening is *Xiaoming* did not drink alcohol. Regarding what he finally drank, we may get the information from the FP that it was wine. The assertion about not drinking alcohol is guaranteed, while the alternative choice is not the only one. As for sentence (3-8), the PP is *he is here*, the OP *benlai* triggers is *he is not here*. These two events represent all the possibilities of his situation,

here or not here. There is no alternative, no exception exists. Hence the FP is expressing the same content as the OP.

sentence	3-1	3-8
IP	Drink alcohol (type)	Be here
PP	Drink alcohol (token)	Be here
OP	Not drink alcohol	Not be here
FP	Drink wine	Not be here
PP & OP Relation	Antonyms	Complements
OP & FP Relation	Set & Sub-set / Type& Token	Identical

Table 3-2

Based on the Theory of Opposite Lexical Relation (OLR; Chaffin & Herrmann, 1984; Cruse, 1986; Halliday & Hasan, 1989, 2014; among others), I am convinced that the relations between PP and OP are in accordance with the features of OLR theory. The two main types of inter-propositional relations are complements and antonyms. The essential core of them is contrast. Next, a brief introduction of OLR theory is provided.

DEFINITION

An opposite lexical relation is an association between two lexical units which have the opposite core meanings in some contexts. (Cruse, 1986)

There are some frameworks for opposite lexical relations such as complements, antonyms, directional converses, relational converses, etc. Among them the most significant and most useful for this dissertation are the concepts of complements and antonyms. Complements are opposites that have mutually exclusive properties. Antonyms are opposites that are at two corresponding points or ranges of a scale, and there is always neutral ground on the scale (Cruse, 1986).

Kind	Frame	Example
Complements	**If something is not X, then it has to be Y.**	**{dead, alive}** **{open, shut }**
Antonyms	**Something can be either X or Y, or it can be neither.**	**{hot, cold}** **{long, short}**

Table 3-3

According to the knowledge above, there are two possible

categories or inter-propositional relations between PP and OP, each relation may impact the reading of FP also. These two categories share one same core essential reading, which is contrastive relation.

Category 1: COMPLEMENTS (FP = OP)
Category 2: ANTONYMS (FP = sub-set of OP)

3.3.2 Constraints of Contrastive Relation

In this part I provide an explanation for why I chose the term contrast instead of opposite or negation. Meanwhile the constraints for contrast are demonstrated as well. According to the opposite lexical theory considered earlier, PP and OP are complements pair or antonyms pair. It seems to be natural that the term "opposite" or "negation" would be chosen to outline this inter-propositional relation. The main problem is the issue being discussed in this dissertation's proposition structure, which means all the logic relations being researched are inter-propositional relations, not inter-lexical/constituent relations.

The core idea of opposite lexical theory is associated with interacting situations between propositions in the structure generally, which the theory itself is still a lexical-considering theory. Regarding the concept of negation, like the discussion in Chapter 2, the sentence negation has always been realized by constituent negation (Gazdar, 1979; Haegeman, 1995; Thompson, Longacre&Hwang, 1985; among others). However, for various constituents structure, not all the constituents are being negated under the triggering of *benlai*.

Since the main issue in this dissertation is propositions and their structure, the relations between structure itself and internal constituents have necessarily been illustrated. For a proposition, every lexical constituent may convey a piece of information. Hence from a semantics perspective, a proposition is an ordered set of information items. For example,

(3-9) *Wo benlai xihuan ni.*

I benlai like you.

I used to like you.

INFORMATION ITEMS: I, like, you.

In sentence (3-9), there are three well-formed constituents, or information items: *I, like, you*. Based on the IP given above, the PP is ambiguous, since there are at least three ways to interpret it.

(3-9a) *Wo benlai xihuan ni, xianzai xihuan ta.*

I benlai like you, now I like him.

I used to like you, now I like him.

(3-9b) *Wo benlai xihuan ni, xianzai bu xihuan ni.*

I benlai like you, now I don't like you.

I used to like you, now I don't like you.

(3-9c) *Wo benlai xihuan ni, xianzai ta xihuan ni,*

I benlai like you, now he likes you.

I used to like you, now he likes you.

All three sentences are acceptable and good sentences. Hence for all the information items inside the proposition, only one is changed enough to impact the *benlai*-triggering function. Under this situation, neither IP and PP, nor PP and OP are completely opposite. Likewise, it is not accurate to express this relation as negation either. Not all the constituents of IP are being negated to

form a PP, thus it is not acceptable to call this sentence negation.

Since there is no need to negate every information item to obtain a PP/OP, the terms opposite or negation are not being considered anymore. This leads to a question: if all the information items are being replaced, can a good PP still be obtained? Can the *benlai* triggering-function keep working?

(3-9d) *Wo benlai xihuan ni, xianzai ta bu xihuan wo.*

I benlai like you, now he doesn't like me.

I used to like you, now he doesn't like me.

(3-10) *Wo benlai xihuan mao,xianzai taoyan gou.*

Wo benlai like cat, now I hate dog.

Wo used to like cat, now I hate dog.

As these two sentences demonstrate, the answer being sought is probably no. When all the information items have been changed, the combination between original proposition and *benlai* is weird. The weirdness happens when all the items are negated and this new proposition obtained is not among the PPs *benlai* can ever trigger. From sentences (3-9a) to (3-9c), the ambiguity is just

evidence that fully constituent negations are unnecessary. The unacceptability of sentences (3-9d) and (3-10) are further evidence that fully constituent negations are unacceptable. Above all, for the proposition with *benlai* as a structure trigger, when deducing a logical related proposition, at least one original information item remains.

Constraint of Triggering

At least one original information item remains.

Returning to the use of the term contrast, as the discussion indicated above, the compared item pairs from the proposition structure can be opposite/negation ({like, dislike},{dead, alive}). But meanwhile the other comparing item pairs are not simply opposite, such as {you, him} or {alcohol, wine}. Considering the complex situation being faced, the concept of contrast emerges. Compared with opposition/negation, contrast focuses more on the situation of changing (Alatis, 1968; Fisiak, 1991; James, 1980; Krzeszowski, 1990; Nehls, 1979; among others). It is the differentiation of elements in a syntagmatic relation, while "opposition" is the differentiation of elements in a paradigmatic relation. For all the relations which are neither complements, nor

antonyms, it can be treated as a contrast. The constraints of contrast are fewer than other strict concepts like opposite, hence for the complicated structure examined here, it is quite suitable.

3.4 *Yuanlai* vs. *Benlai*

When talking about *benlai*, *yuanlai* will probably be mentioned. These two adverbials share a very close explanation under many circumstances. There have been previous attempts to distinguish *benlai* and *yuanlai* (Bai, 2010; Mao et al., 2008; Zhang, 2006; Zhao, 2007; among others), the comparison mostly depended on replacement testing. The analysis was more like the description of the usages of these two adverbials but provided no reason why the differentiation exists. Depending on the new approach of *benlai* semantics features provided already, the comparison between *benlai* and *yuanlai*[2] may be able to provide a deeper analysis.

3.4.1 Truth-Value Distribution

To compare these two adverbials, I provide a group of sentences first.

---

[2] *Yuanlai* works as an adverbial with two meanings. One is similar to *benla*i, meaning as *befor*e. This is what I am focusing on. The other reading as "*it turns out that...*" is not considered in this dissertation.

(3-11a) *Wo benlai xihuan ta, xianzai bu xihuan le.*

I benlai like him, now not like Prc.

I used to like him, now I don't like him anymore.

(3-11a) *Wo yuanlai xihuan ta, xianzai bu xihuan le.*

I yuanlai like him, now not like Prc.

I liked him before, now I don't like him anymore.

(3-12a) *Wo benlai xihuan ta, xianzai ye xihuan ta.*

I benlai like him, now I still like him.

I used to like him, now I still like him.

(3-12b) *Wo yuanlai xihuan ta,xianzai ye xihuan ta,*

I yuanlai like him, now I still like him,

I liked him before, now I still like him.

(3-13a) *Wo benlai xihuan ta. (xianzai yiding bu xihuan le.)*

I benlai like him. (Now must not like Prc.)

I used to like him. (Now I don't like him anymore definitely.)

(3-13b) *Wo yuanlai xihuan ta. (houlai ne ??)*

I yuanlai like him. (then SFP??)

I liked him before. (And then ??)

In sentences (3-11a) and (3-11b), it seems that *benlai* and *yuanlai* can replace each other. The follow-up propositions are both expressing that "*I liked him before but now I don't.*" As for sentences (3-12a) and (3-12b), a problem arises. For sentence (3-12b), the expression is good and acceptable. The speaker liked him before and is still keeping their affections. While for sentence (3-12a), when using the adverbial *benlai*, the whole conversation is weird and not understandable. If the FP is avoided, as in sentences (3-13a) and (3-13b), the proposition with *benlai* contains sufficient information for the addressee's understanding. But the proposition of *yuanlai* is an unfinished proposition.

To illustrate these better, their functions in the framework of the truth-value distributions between propositions can be observed. As the discussion stated earlier, *benlai* can activate a time line, meanwhile *yuanlai* is a typical time NP as well. Hence the time point of the IP is Time 1, and the FP event represents Time 2. Now the truth-value tables of the IP event when it is co-occurring

with *benlai* and *yuanlai* respectively can be seen.

TIME 1: Inner Proposition Event Time

TIME 2: Follow-Up Proposition / Outer Proposition Event Time

Benlai Truth-Value Distribution Table

Time 1	Time 2
1	0
0	1

Table 3-4

Yuanlai Truth-Value Distribution Table

Time 1	Time 2
1	0
1	1
0	0
0	1

Table 3-5

From this analysis, the adverbial *yuanlai* is not able to provide a PP/OP with sufficient information, or in other words, *yuanlai* is not a proposition structure trigger. According to the careful analysis of *benlai's* features previously, I am convinced that this is the core differentiation between *benlai* and *yuanlai*. Their functions are totally different, *benlai* works as a structure trigger, while *yuanlai* is just a time NP inside a small clause. This observation can explain the phenomena in sentence (3-12) group and (3-13) group demonstrated above.

3.4.2 Proposition Structure Trigger vs. Time Clause Marker

According to the general conclusion made above, the main differentiation between *benlai* and *yuanlai* is they are different function constituents. *Benlai* is a contrastive proposition structure trigger, while *yuanlai* is a pure time-NP marking the time clause.

BENLAI Contrastive Proposition Structure Trigger

Semantic Form:

Inner Proposition (Trigger) + Outer Proposition (Implicit)

Syntactic Form：

[[[IP] [OP]] trigger]

YUANLAI Time Clause Marker

Semantic Form:

Proposition (Marker)

Syntactic Form:

[[P] time-marker]

If this hypothesis works, then the bare proposition *yuanlai* marked can be the IP within the structure of *benlai* triggering. Even though *yuanlai* and *benlai* share a similar lexical reading, the differentiations of semantic accounts and syntactic functions should be clear enough to accept the situation that *benlai* and *yuanlai* are co-occurring. This is a test to prove the previous analysis and hypothesis.

HYPOTHESIS

[[[Inner Proposition] *time-marker*] [Outer Proposition] *trigger*]

Fortunately there are ideal data in the corpus supporting this hypothesis (sentence (3-14)), which supports the observation for

benlai and *yuanlai* made earlier providing a considerable new way to re-understand the categories of adverbials in Mandarin.

(3-14) **Yuanlai** *zheli* **benlai** *henshao baozi, bu zhi cong nali lai le liang tou.*

Yuanlai here benlai less leopard, not know from where come Pfv two CL.

Before, this seldom used to have leopards; nobody knows where they are nowadays.

3.5 *Benlai-Jiu*

In this section, a brief analysis of the combination *benlai-jiu* is provided. The reason why this construction has arisen is that *benlai-jiu* demonstrates different semantic accounts compared with the bare adverbial *benlai*. Of primary emphasis is that the *benlai-jiu* being discussing here includes two syntactic forms: "*benlai+jiu+.......*" and "*benlai+......+jiu+......*". This means that *benlai* and *jiu* are not necessarily joined, in this consideration. The co-occurrence in the same proposition is a sufficient condition for them to demonstrate some different features which are discussed below.

3.5.1 The Function of Gradability

The first type of semantic accounts of *benlai-jiu* is the type of gradability. It has two sub-structures. As sentences (3-15) and (3-16) show below, this is one sub-structure of gradability type.

(3-14) *Tamen sange shi hezu dixiashi, dixiashi benlai-jiu bu da,ruguo si ge ren zu hui youdian ji.*

They three CL are joint rent basement, basement benlai-jiu not large, if four CL person rent will some crowded.

These 3 persons are joint-renting the basement, the basement benlai-jiu is not quite large, if four persons are sharing, it will be a little crowded.

(3-15) *Wo benlai-jiu shi linshigong, you zai waimian pao le yi nian, juyuan bu hui yizhi gei wo liu weizi.*

I benlai-jiu am temporary worker, also be outside travel Pfv one year, theatre not would always for me keep position.

I benlai-jiu am a temporary worker, and traveled outside for one year also, the theatre will not always keep a position for me.

In sentence (3-14), *benlai-jiu* marked the proposition that "*the*

basement is not large." According to the information the addressee received before, "t*here are 3 persons joint-renting,*" an effect/conclusion can be obtained that "*the basement is crowded.*" And the FP provides more causes like "*4 persons sharing,*" thus the conclusion generated here is "*the basement will be much more crowded.*" In sentence (3-15), the information *benlai-jiu* marked is "*temporary worker.*" This information may cause a reasonable effect that "*the theatre will not keep a position for me.*" While the follow-up proposition seems to provide another cause as "*traveled outside for one year,*" and this cause can make the effect "*not keep position*" become much more likely to happen.

(3-14) ***Cause 1****: basement is not large. (benlai-jiu)*

Effect 1*: basement is crowded for living.*

Cause 2 (supplied by FP)*: 4 persons sharing.*

Effect 2*: the basement is much more crowded for living.*

(3-15) ***Cause 1****: I am the temporary worker. (benlai-jiu)*

Effect 1*: they may not keep a position for me.*

Cause 2 (supplied by FP)*: I traveled outside for one year.*

Effect 2*: they will most likely not keep a position for me.*

Based on these demonstrations, Effect 1 and Effect 2 are an identical event but in different scaled situations. In other words, these two effects belong to a gradable scale. *Benlai-jiu* marks a cause condition Cause 1 to lead to an effect, meanwhile it triggers an OP providing a new cause condition Cause 2 which will cause the effect moving forward on the scale to a higher position. Effect 1 and Effect 2 are gradable/scalar related. This is one sub-type of the Gradability Function Category of *benlai-jiu*'s readings.

Sub-type 1 of Gradability Category

Cause 1 (benlai-jiu) + Effect 1 + Cause 2 + Effect 2

Effect 1 < Effect 2

According to the pattern sub-type 1 obtained above, it will be easier to understand the pattern of sub-type 2. Sentence (3-16) shows the second sub-type.

(3-16) *Xiaozhangzhuang honglao buduan, cunmin rizi benlai-jiu*

bu hao guo, zai jiashang dafu zhengshui, jiajiahuhu durirunian.

Xiaozhangzhuang flood non-stop, citizens' life benlai-jiu not easy

pass, and plus highly taxation, every family counting down the days.

Xiaozhangzhuang village gets non-stopping flood, the citizens benlai-jiu are living desperately, and plus the sharp taxation, every family is living one day like a year.

(3-16) **Cause 1**: *There are always a lot of floods.*

Effect 1: *The citizens are living desperately. (benlai-jiu)*

Cause 2: *The sharp tax is requested.*

Effect 2: *The citizens' living is much more desperate.*

Compared with sub-type 1, *benlai-jiu* in sentence (3-16) is marking Effect 1 now, instead of Cause 1. This means that *benlai-jiu* may mark a Cause-Effect relation proposition, and trigger another pair of Cause-Effect relations. The two effects are scalar related within the framework of gradability. *Benlai-jiu* triggers a structure which includes IP and OP and generates the function of gradability.

Sub-type 2 of Gradability Category

Cause 1+ Effect 1 (benlai-jiu) + Cause 2 + Effect 2

Effect 1 < Effect 2

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Category 1 of Benlai-jiu: Function of Gradability

Inner Proposition (benlai-jiu) + Outer Proposition

Cause 1 + Effect 1 + Cause 2 + Effect 2

Effect 1< Effect 2

</div>

Based on this conclusion, some ambiguity of *benlai-jiu* sentences can be explained and distinguished. The different readings are coming from where the *benlai-jiu* marked inside IP, cause or effect.

(3-17) *Ta benlai-jiu da laopo.*

He benlai-jiu beat wife.

He benlai-jiu beats his wife.

(3-17a) *Ta benlai-jiu da laopo, xianzai xiangxin le bieren yaoyan, xiashou geng hen le.*

He benlai-jiu beat wife, now convinced Pfv others gossip, beat more crazy Prc.

*He benlai-jiu beats his wife, now he is convinced by others' gossip, beats his wife more crazily. (**benlai-jiu marked effect**)*

(3-17b) *Ta benlai-jiu da laopo, xianzai you kaishi dubo, ren geng huai le.*

He benlai-jiu beats his wife, now also starts to gamble, person more bad Prc.

*He benlai-jiu beats his wife, now he starts gambling also, he is much worse now. (**benlai-jiu marked cause**)*

3.5.2 The Function of Revising

Next Category 2 of *benlai-jiu*, the function of revising, is discussed. As the discussion stated previously, the adverbial *benlai* triggers a time line. For *benlai-jiu* construction, the time line still remains.

(3-18) *Zheli benlai-jiu you yi ge youyongchi, bu shi zuijin cai chuxian.*

Here benlai-jiu have yi CL swimming pool, not is recently just appeared.

Here benlai-jiu has a swimming pool for long, not just appeared recently.

Sentence (3-18) illustrates two time points. The first time point is the time with IP, which the proposition *benlai-jiu* marks. The other time point is a false-belief time point with non-appearing background knowledge. Even though this background knowledge proposition is implicit in this structure, the FP is attempting to revise the background information.

(3-18) ***Inner Proposition****: Time 1 is correct.*

Background Proposition (implicit)*: Time 2 is correct.* ***(false belief)***

Follow-Up Proposition / Outer Proposition*: Revising time 2 to time 1.*
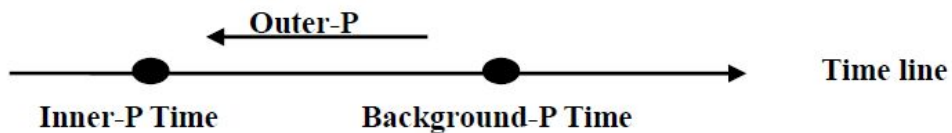

Chart 3-2

This sub-type of category 2 can be treated as an IP&OP structure as seen below.

Sub-type 1

Inner Proposition + Outer Proposition

Reinforced Shared Knowledge + Correcting Background Beliefs

(3-19) *zhe wei jizhe shuo, chuandi shishi benlai-jiu shi jizhe zhize, bu xuyao tebie biaoyang ta.*

This CL reporter say, convey truth benlai-jiu is report responsibility, not need particularly praise him.

This reporter said, to convey the truth benlai-jiu is the responsibility of the reporter, there is no need to praise him particularly.

Sentence (3-19) is the other sub-type of category of revising. The IP is emphasizing known shared knowledge, while the FP clarifies the false belief that the shared knowledge has alternatives.

(3-19) **Inner Proposition**: *Reinforce the Shared Knowledge*

Background Proposition (implicit): *The shared knowledge is conditional or gets alternatives.* **(false belief)**

Outer Proposition: *Cancellation of Alternative / Clarification of false belief.*

Hence I am convinced that *benlai-jiu* in category 2 is triggering a proposition structure with the IP reinforcing the correct information while the OP revises the background belief.

Sub-type 2

Inner Proposition + Outer Proposition

Reinforce Shared Knowledge + Cancellation of Alternatives

Both sub-type 1 and sub-type 2 are compatible with a pattern made for category 2 of *benlai-jiu* semantic account, the category of revising, since the situations discussed in this section are all about reinforcing the correct information and revising the non-accurate ones.

Category 2 of Benlai-jiu: Function of Revising

Inner Proposition (benlai-jiu) + Outer Proposition

Reinforce Shared Knowledge + Revising of False Belief

At the end of this analysis of *benlai-jiu*, two issues need to be emphasized. First, although *benlai-jiu* demonstrates quite different accounts of semantic and pragmatic features with bare *benlai*, the core functions remain. *Benlai-jiu* also triggers a proposition structure and the understanding of inter-propositional relations inside the structure is exclusive and obligatory. The causes of the differentiations between *benlai* and *benlai-jiu* are beyond the scope of this dissertation.

Secondly, the inter-propositional relations between IP and OP for *benlai-jiu* structure are still contrastive relations. For both categories 1 and 2, the OPs are replacing partial information elements from IPs. Considering the discussion made before about contrast, opposition and others, the interacting relations demonstrated now are still compatible with the concept of contrastive relations above. Therefore, the implicit proposition structures *benlai-jiu* triggers are still CPS, just like the *benlai* case.

3.6 Summary

In this chapter, the Mandarin adverbial *benlai* and the like such as *yuanlai* and *benlai-jiu* construction were discussed. According to the hypothesis proposed in this dissertation, *benlai* is a CPS Trigger. Even though previous research noticed that *benlai* may lead to a negative judgment, I am convinced that the contrastive proposition which *benlai* triggers demonstrates the syntactic and semantic features that are distinguished from presupposition or implicature.

I argue that there is another type of proposition which is functioning with the adverbial trigger while the proposition itself does not get well-formed. Although this proposition is implicit in most cases, the reading of it and the interacting relations between IP and itself are definitely certain. Based on this knowledge, *benlai* is one of the triggers that can mark a propositional structure and trigger the contrastive proposition(s) being discussed.

Semantics CPS of *Benlai*
Inner Proposition + Possible Proposition + Outer Proposition
Formula 3-2

Syntax CPS of *Benlai*
Inner Proposition (Marker) + Follow-Up Proposition
Formula 3-3

Depending on the pattern built, the inter-propositional relations have been analyzed carefully in this chapter. *Benlai*-triggering structure functions on a time line, and the IP and PP are logically related. The different categories of logic relations between IP and PP were discussed, while based on this classification processing, the semantic accounts of *benlai* and its structure were demonstrated in another step.

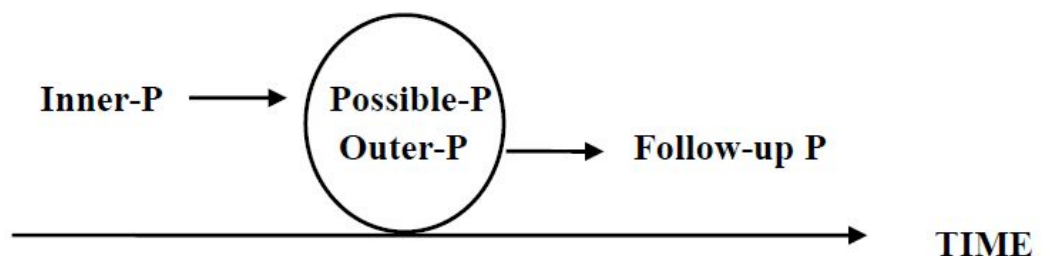Inner-P ⟶ Possible-P / Outer-P ⟶ Follow-up P — TIME

Chart 3-1

Inter-propositional Relations between IP and PP

Category 1: [+ DURATION] ([+/- T-Property] & [- P-Property])

Category 2: CAUSE & EFFECT ([+ T-Property] & [+ P-Property])

Category 3: TYPE & TOKEN (HABITUAL RELATION)

Category 4: POSSIBILITY & PREDICTION

Formula 3-4

Moreover, the essential part of this research was the discussion of PP and OP. Under the same time point on the time line, PP and OP are both implicit propositions in this structure, while the core meanings of pattern are contributed by them. PP and OP are always opposite (in some way) to each other. Their relations are associated with the features of complements and antonyms relations. In this part, a considerable analysis was provided on why the concept contrast was chosen to characterize this logic linking them, rather than opposition or negation. This acknowledgement is quite significant since further observations are still based on this awareness.

Classification of contrastive relations between PP and OP:

Category 1: COMPLEMENTS (FP = OP)

Category 2: ANTONYMS (FP = sub-set of OP)

Based on all the observations above, the other two cases of *benlai*-the-like group were discussed, *yuanlai* and *benlai-jiu*. *Yuanlai* is generally used to mutually explain each other with *benlai*. In this theory, there are different types of triggers. *Benlai*, as previously stated, is a CPS Trigger and triggers one or more implicit propositions. *Yuanlai* is not marking any pattern. It is a pure time oriented adverbial and only dominates the small clause it belongs to.

As for the construction of *benlai-jiu,* even though there are some differentiations of semantic accounts between it and the pure *benlai* case, the core acknowledgements are consistent. *Benlai-jiu* is triggering a PP&OP pattern with functions of grading or revising.

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Category 1 of Benlai-jiu: Function of Gradability

Inner Proposition (benlai-jiu) + Outer Proposition

Cause 1 + Effect 1 + Cause 2 + Effect 2

Effect 1< Effect 2

</div>

<div style="border:1px solid black; padding:10px;">

Category 2 of Benlai-jiu: Function of Revising

Inner Proposition (benlai-jiu) + Outer Proposition

Reinforce of Shard Knowledge + Revising of False Belief

</div>

As one of the most significant representations of this theory, the case of *benlai* demonstrates the reasonability of the hypothesis proposed. The semantic and syntactic accounts of *benlai* are strong supports for this observation and explanation. I am convinced that the CPS Theory functions across a large range of Mandarin Chinese, and *benlai* is an ideal case among the elements of pure adverbials. Next I provide another type of case, the construction case, *Da+NP+de* pattern.

Chapter 4 *Da+NP+de* Structure

In this chapter, an analysis of *Da+NP+de* within the framework of the CPS hypothesis is provided. Above, the adverbial *benlai* was proposed as a typical trigger of implicit contrastive propositions. Here besides the bare lexical item, a complicated formal construction is considered as another case of CPS trigger in Mandarin.

In section 1, the semantic accounts of *Da+NP+de (DND)* will be processed. A brief literature review of DND construction and critical summary of them is provided. Based on this, the research focuses and the hypothesis of DND semantics pattern are proposed. In section 2, the different categories of DND sentences are clarified. The perspective considered was mainly on the relationship between the time NP and the FP event. Here to classify these relations, the Fuzzy Set Theory (FST) is introduced. In section 3, the constraints of follow-up proposition events are discussed. Based on this observation, the issue of the formalization of the structure is discussed. In section 4, a primary analysis of the constraints of the time NP is proffered. According

to these constraints, the essential convention and how it works in DND construction is proposed. Finally in section 5, a summary is given.

4.1 Da+NP+de as a Contrastive Proposition Trigger

4.1.1 Literature Review

There are some previous studies noticing the interesting pattern *Da+NP+de* in Mandarin (for example, *da baitian de*, *da dongtian de*). Since Song (1994) paid particular attention to this construction, the meanings and features of DND structure have been discussed in different ways (Liu, 2009; Shen, 1996; Song, 1994; Xiang, 1998; Zhao, 2006). In general, there are three interpretations which are critically introduced below.

Interpretation A: "Special Time"

The NP in this construction is the time NP; based on this constraint, Shen (1996) proposed that the semantic readings of the whole construction emerges from the properties of NP. The time NP indicates the special time which is distinguished from

ordinary days. Shen (1996) believes that only the NPs with specificity can be used in this structure. Moreover, NP should indicate the days of [not-working]. Based on this analysis, Shen (1996) claimed that the NP which is not special enough for routine life or not a well-known resting day is not acceptable in this structure, for example, the time NP *shendanjie* (Christmas day)/ *chuntian* (spring)/ *qiutian* (autumn)/ *shangwu* (forenoon), etc. Under observation, the specificity of NP is not essential for the usage of DND pattern as seen in sentences (4-1) to (4-4) below.

(4-1) *Da xiatian de, ni zenme dai pi maozi.*

Da summer de, you why wear leather cap.

Da xiantian de, why are you wearing a leather cap.

(4-2) *Da dongtian de, ta yao chuqu youyong.*

Da winter de, he want go out swim.

Da dongtian de, he wants to go swim.

(4-3) *Da chuntian de, xiong hai mei xing ne, nimen jiu kaishi nao le.*

Da spring de, bear yet not wake SFP, you already start fight Prc.

Da chuntian de, even the bear does not wake up yet, you guys already start fighting.

(4-4) *Da qiutian de, women zaodian huiqu, yao xiadi ganhuo ne.*

Da autumn de, we early go back, need go-to-the-field work SFP.

Da qiutian de, let's go back early, we need to go to the field to do farm work.

In Shen's (1996) opinion, the sentences (4-1) and (4-2) are good sentences because the NPs *xiatian (summer)* and *dongtian (winter)* are ideal NP with the readings of resting and specificity. However, sentences (4-3) and (4-4) should not exist since the NPs *qiutian (autumn)* and *chuntian (spring)* are not special enough. But as seen, there are acceptable sentences in the corpus that the NP such as *qiutian (autumn)*, *chuntian (spring)*, *shangwu (forenoon)* or even *badian (8 o'clock)* can be used in DND structure.

Interpretation B: Markedness

Instead of focusing on the NP only, some studies paid attention to the combination of Da and NP. Xiang (1998) discussed the relations between Da and NP, thinking that the lexical item Da

marks the main property of the NP. Like giving a high degree operator, Da outlines the main features of the event which NP indicates such as sentence (4-5).

(4-5) *Da baitian de, ni zai sushe li shuijiao!*

Da daytime de, you are hostel in sleep.

Da baitian de, you are sleeping in the hostel!

Xiang (1998) claimed that when combining Da, NP *baitian (daytime)* functions with the reading of *Working* in most cases. However, the events behind DND are not always related with the conventional acknowledge of NP. With the example NP *baitian,* sentences (4-6) and (4-7) are used with a proposition that is not about working. It seems that the effects from the property of NP is very limited on the issue of the usage of DND. Meanwhile, I am calling into question the main property of a NP as too conventional to reach agreement for everyone.

(4-6) *Da baitian de, wujian gan shenme? Kuai qu gei women zhunbei ji ge cai ba.*

Da daytime de, play-sword for what? Quickly go for us prepare several CL dish SFP.

Da baitian de, why are you playing with a sword? Go prepare some dishes for us quickly.

(4-7) *Da baitian de, bu zai jia daizhe, changge zuo shenme?*

Da daytime de, not at home staying, sing for what?

Da baitian de, you are not staying at home, why are you singing songs?

Interpretation C: Most Relevant Behavior

This kind of opinion is in some ways very similar with interpretation B, see for example Zhao (2006). The differentiation between interpretation B and C, as Zhao (2006) stated, provides a way to explain what the "main property of NP" is. Based on the concept of relevance, Zhao and others thought for every time NP, there is an event or behavior which is most relevant to it. DND structure is conveying the message that the NP is not joined with this most relevant behavior but with others. The main problem of this opinion just like with interpretation B, is that there are a number of good sentences which the readings are not about relevant relations.

(4-8) *Da baitian de, ni xiang he wo chaojia ma.*

Da daytime de, you want with me fight SFP.

Da baitian de, do you want to fight with me?

(4-9) *Da wanshang de, ni xiang he wo chaojia ma.*

Da night-time de, you want with me fight SFP.

Da wanshang de, do you want to fight with me?

For sentences (4-8) and (4-9), the speaker is expressing the same meaning which is I don't want to fight with you now. While the interesting thing is, both NP *baitian (day-time)* and *wanshang (night-time)* can be used in this circumstance and compose a very good sentence. For *baitian* and *wanshang,* neither of their most relevant event is fighting, while it is not easy to choose a proper time to fight either.

Based on the above observation and analysis made, this research is trying to demonstrate the proposition pattern of DND structure and its semantic accounts. The relations between NP and FP are paid special attention. Meanwhile, I am noticing the complicated readings DND may convey, hence the classification of it is one of the research aims as well.

4.1.2 *Da+NP+de* and Implicit Contrastive Proposition

Based on the data analyzed, a DND structure always has a FP behind it. In the semantic account, the FP can have different readings. Just like the *benlai* case discussed in the previous chapter, DND construction triggers a CPS with more than one implicit proposition. The FP can be any proposition from the implicit structure after being well-formed.

Syntactic pattern of DND structure:

DND + Follow-Up Proposition

Semantical pattern of DND structure:

DND + Assumptive Proposition + Contrastive Proposition + Supplementary Proposition

Formula 4-1

DND: *Da+NP+de Construction*

Follow-Up Proposition (FP): the proposition co-occurring with DND.

Assumptive Proposition (AP): *the proposition which was assumed to happen under the reference time NP.*

Contrastive Proposition (CP): *the proposition which was contrastive with the AP's expectation and truly happened.*

Supplementary Proposition (SP): *based on the effects of CP, another proposition which is supplying information.*

According to the patterns assumed above, there are three possibilities for the readings of FP, since FP is a syntactic concept, while others are semantic concepts. The essential FP also demonstrates the mechanism of how the implicit structure works.

The readings of FP:

Form	Meaning	Acceptability	Example
FP	AP	× Violation of the basic meaning of DND.	*Da xiantian de, ta zai chi xiugao.
FP	NP	√	Da wanshang de, ta hai yao chumen.
FP	SP	√	Da qiutian de, women dou yao xiadi ganhuo ne. (Don't stay outside for long,

Table 4-1

4.2 The Categories of *Da+NP+de* Function

4.2.1 The Fuzzy Set Theory

Based on previous studies and the observations above, the relations between time NP in DND construction and other propositions in this implicit structure are essential for the proposed theory and probably the key to revealing the mechanism of DND's function. First, I focus on the NP itself only. As already known, NP in DND is only able to be a time NP, hence every NP being discussing indicates a time-point. Now all the events which might happen under the time-point NP are classified. As one can imagine, there are a huge number of events that could happen under the NP, which the possibility of are quite different. Considering the concept of convention (Lewis, 1969; Strawson, 1964), three classifications of the relations between NP and event are provided.

Definition of Convention (Lewis, 1969)

A regularity in the behavior of members of a given group who repeatedly find themselves confronted by a problem of co-ordination, who solve this problem in one of several possible ways, and in return expect the same response by others in the group.

In general, the convention is assumed to be regular depending on the common shared knowledge, habitual behaviors and routine experiences. The convention situation is the criteria for deciding the degree of how an event is relevant to the time NP. According to the criteria of convention, there are three types of relations between event and NP.

Types of Relations between NP and Event	*Examples*	
	NP	*EVENT*
Positive-Relevant	**Daytime**	**Work, go to school...**
	Night-time	**Sleep, rest...**
Negative-Relevant	**daytime**	**Sleep, rest...**
	Night-time	**Work, go to school...**
Irrelevant	**Daytime/night-time**	**Fight, sing...**

Table 4-2

With the assistance of the concepts of convention and relevance, a rough classification of the relations between NP and Events can be accessed. However, there are some problems yet. Based on the concept of relevance (Blass, 1990; Sperber, Wilson, Ziran, & Yongping, 1986; Werth, 1981), the relevant type and irrelevant type can be distinguished, while considering the internal category of relevant type, there is no criteria to clarify the positive-relevant group and negative-relevant group.

Definition of Relevance (Sperber et al., 1986)

The relevance of an entity for a particular goal is a measure of how much the entity contributes to the attainment of the goal. If it does not contribute anything, then it is considered to be irrelevant to the goal.

According to the notion of relevance, only positive-relevance put forward is the relevance situation. Both negative-relevance and irrelevance belong to the category of the irrelevance situation. This problem being confronted leads me to apply a new theory tool as a method of classification. Therefore the Fuzzy Set Theory is used.

The Fuzzy Set Theory (FST) is a mathematics concept. In this dissertation, I am not aiming to discuss the FST deeply, but the core concept of FST is quite significant for this analysis of DND. In general, FST is the set whose elements have DEGREE of membership (Klaua, 1965; Klir & Yuan, 1995; Zadeh, 1965, 1972). For the classical set, one element either belongs or does not belong to the set. Moreover for FST, one element may belong, not belong or partially belong to the set. FST believes that the elements of set do have a degree of membership.

The comparison of definitions between Classical Set and Fuzzy Set

Classical set (crisp set):
The membership of elements in a set is assessed in binary terms according to a bivalent condition. An element either belongs or does not belong to the set.

Membership = 0 / 1

Fuzzy set:
Permits the gradual assessment of the membership of an element in a set. This is described with the aid of a membership function valued in the real unit interval [0,1].

Membership = [0,1]

When the value of membership is 0, this element is not included

in the fuzzy set. If the value is 1, the element is fully included in the fuzzy set. If the value is in the interval between 0 and 1, the element is called partially included in the fuzzy set, or it is a fuzzy member.

> **If m(x)=0,**
> **(U, m) not include x;**
>
> **If m(x)=1,**
> **(U, m) fully include x;**
>
> **If 0<m(x)<1,**
> **x is a fuzzy member.**

4.2.2 Three Fuzzy Relations between time NP and Event

Based on the acknowledgment of FST, a re-consideration of the relations between NP and events it is dedicated to is permitted. In the previous discussion, depending on the concepts of convention and relevance, three relations were obtained. According to this primary work, I would like to re-interpret the relations within the framework of FST. Let us now return to Table 4-2 again.

Types of Relations	*Examples*	
between NP and Event	*NP*	*EVENT*
Positive-Relevant	**Daytime**	**Work, go to school...**
	Night-time	**Sleep, rest...**
Negative-Relevant	**daytime**	**Sleep, rest...**
	Night-time	**Work, go to school...**
Irrelevant	**Daytime/night-time**	**Fight, sing...**

Table 4-2

The judgment criteria of relevance is the degree of convention. Since relevance is a binary concept, the differentiation between negative-relevant and irrelevant is difficult to explain under this circumstance.

Now assuming that the DND construction is activating a set *U*, the elements of *U* are the events which might happen under the time-point NP. For each element (i.e. *x*) of *U*, *x* obtains a value *m* which been called the grade of membership of *x* in *(U, m)*. The pair *(U, m)* is the fuzzy set which has been generated in the DND CPS.

> *Fuzzy Set (U, m),*
>
> *U = {x1,x2,x3,x4,x5,x6,...........xn} .*
>
> *For each x ∈U,*
>
> *There is a m(x).*
>
> *m: U → [0,1].*

In the fuzzy set being built, the criteria of the value of membership is the convention situation between NP and event. If the event is maximally positively relevant with the NP, the value of membership is 1. On the contrary, if the event is negatively relevant with the NP under the observation of convention, the value of membership will be 0. Other events which are irrelevant with the NP are fuzzy members in the fuzzy set. Hence the three types of relations obtained above are associated with the three sets below.

Relevance Account	*Fuzzy Set Account*
Positive-relevant	*{x ∈ U │ m(x) = 1 }*
Negative-relevant	*{x ∈ U │ m(x) = 0 }*
Irrelevant	*{x ∈ U │ 0<m(x)<1 }*

Table 4-3

Therefore an ideal method to classify the relations between NP and events will not be restrained by the limitation of the notion of relevance. According to the different values of membership, there are three categories of events under the time-NP. I provide the element examples with the assumption NP *baitian (daytime)*.

TYPE A

{x ∈ U │ m(x) = 1 }

Example: {work, go to school...}

TYPE B

{x ∈ U │ m(x) = 0 }

Example: {rest, skip the class...}

TYPE C

{x ∈ U │ 0<m(x)<1 }

Example: {fight, sing, eat an apple...}

Since the criteria for membership value judgment is according to the convention, the relation between TYPE A and TYPE B is demonstrating a very interesting situation. Assuming that each Type A element can find its contrastive/negated form in the Type B set (*work* vs. *rest*/ *go to school* vs. *skip the class*), this means

that TYPE A and TYPE B can be contrastive mapping.

Convention is the regularity of repeated behavior, the most unconventional behavior must be the violation of the most conventional behavior. Therefore we are proposing that the Type A set and Type B set are Mirror Symmetry related. As chart 4-1 shows below, the left set on the coordinate axis is the Type B set (*x(m)=0*); and the right one is the Type A set (*m(x)=1*). The discrete points between the interval [0,1] are the elements of Type C, which are the fuzzy members. Therefore the relations between NP and events are clarified under the FST; meanwhile, the classification of them is essential to analyze the semantic features of DND CPS.
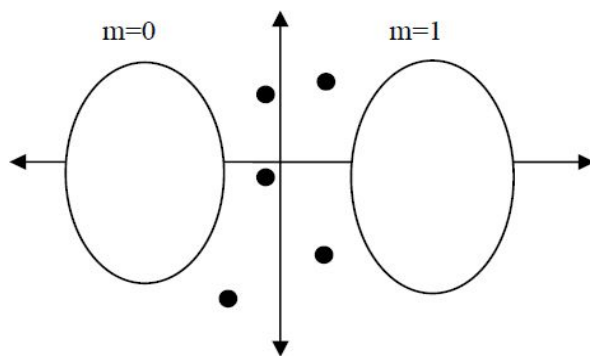

Chart 4-1

Here I would like to say a little bit more about the fuzzy set idea.

When dealing with the adverbial or adjective words, the concept of scale or gradability are always mentioned. However, for the usage of this tool, the polarity points are quite clear and easy to use. For the middle part of the scale, which is lack of particular characters (for example, *not hot nor cold, not tall nor short*, etc), it is hard to provide a suitable label since there is only one zero point. However, the FST illustrates that the ZERO can be a feature. Even though there are quite a lot of points on the scale standing in an embarrassing position, they can be provided a [+ ZERO] feature.

4.3 Semantics Constraints of *Da+NP+de* Structure

4.3.1 The Acceptability of Three Fuzzy Relations

According to the analysis above, there are three fuzzy relations between the NP of DND structure and events. However, not all of these three combinations can process the acceptable sentence of DND. Based on the observation of the inter-propositional relations, in DND structure, the feature of contrast is essential

and compulsive. Hence if the NP and FP are conventionally related, the sentence is weird and unacceptable.

(4-10) *Da xiatian de, ta zai chi xuegao.*

Da summer de, he Prg. eat ice cream.

Da xiatian de, he is eating an ice cream.

Form	Meaning	Acceptability	Example
FP	AP	× Violation of the basic meaning of DND.	*Da xiantian de, ta zai chi xiugao.
FP	NP	√	Da wanshang de, ta hai yao chumen.
FP	SP	√	Da qiutian de, women dou yao xiadi ganhuo ne. (Don't stay outside for long, come back early since it is a busy season.)

Table 4-1

As demonstrated in Table 4-1, FP cannot be the assumptive proposition, which means the NP cannot trigger a positive-relevant event in DND structure. In sentence (4-10), event "*eat ice cream*" is conforming to the general convention of what people frequently and exclusively do in the time of "*summer.*" Therefore there is no contrastive information being triggered. This is a clear violation of the basic semantic features of DND structure. Hence sentence (4-10) is a bad unacceptable sentence.

Under the framework of FST built earlier, the constraint of DND structure of the semantic accounts is shown below. This observation and summarization clarifies the question of what kind of proposition can be used with the *Da+NP+de* construction ahead. Furthermore, the categories of DND contrastive structure are provided which is significant to the later discussion of the grammaticalization issue.

Constraint of Da+NP+de Structure

TYPE	Membership Value	Acceptability
A	**m(x)=1**	✗
B	**m(x)=0**	√
C	**0<m(x)<1**	√

Table 4-4

Here a brief explanation of some cases which Type A seems to work but actually does not is necessary. As stated above, the value of membership is based on the convention generally. While for one NP, there is probably more than one understanding of convention. For example, under the time "*Sunday,*" the event "*having rest*" is conventionally matched, while the event "*cleaning the room*" can be conventionally accepted as well. The sentences (4-11) and (4-12) are both acceptable sentences while they seems to be contradictory to each other.

(4-11) *Da xingqitian de, ni weishenme bu zai jia xiuxi.*

Da Sunday de, you why not at home rest.

Da xingqitian de, why you are not staying at home to get some

rest.

(4-12) *Da xingqitian de, ni yinggai dasao fangjian, bie shuijiao*

le.

Da Sunday de, you should clean room, do-not sleep Prc.

Da xingqitian de, you should clean the room, stop sleeping.

In particular, each convention matching between NP and events leads to one particular fuzzy set system. Therefore in this system, the criteria of membership value is exclusive. For every fuzzy set, only one criteria exists. To understand the package of the fuzzy set system better, it may be treated as a model. Each convention criteria builds one model, even though the target NP may have other interpretations of convention, each element in the model can only get one membership value. If the criteria of membership has been changed, the value of the membership must been changed too, after all, it is a different issue with a different fuzzy set system modeling.

For instance, sentences (4-11) and (4-12) share the same time NP *xingqitian (Sunday)*, while the criteria of membership values are different. They belong to different models. In sentence (4-11), the

event "*have rest*" is very reasonable and common for the speaker's conventional knowledge, hence the FP "*not have rest*" is the element with a value 0 for membership. As for sentence (4-12), the event "*clean the room/ not have rest*" is the value 1 element then. Therefore the FP event "*sleep*" has a membership value of 0. Hence for these two sentences, FPs are still working with the events of Type B (*m(x)=0*).

4.3.2 Formal Implicit Contrastive Structure

In this section, I discuss an important issue for this dissertation, the degree of formalization of the Implicit Contrastive Structure with triggers.

As the analysis previously demonstrated, DND structure allows the events of TYPE C to function. Type C events are the fuzzy members which are partially included in the set. In other ways, the events is irrelevant with the time NP under the conventional observation. Like sentences (4-8) and (4-9) below, the only distinctive feature is the time-NP, while the degree of

conventional matching between the event and either NP is extremely low.

(4-8) *Da baitian de, ni xiang he wo chaojia ma.*

Da daytime de, you want with me fight SFP.

Da baitian de, do you want to fight with me?

(4-9) *Da wanshang de, ni xiang he wo chaojia ma.*

Da night-time de, you want with me fight SFP.

Da wanshang de, do you want to fight with me?

The usage of Type C proposition in DND structure is one piece of evidence of the formalization of the DND pattern. Unlike the case of *benlai,* DND construction is highly dependent on the convention at the beginning. This circumstance may awaken doubts about whether the DND is working as a formal trigger or just relying on the meaning of time NP. With strong support from Type C usages, I am convinced that the DND structure is a formal propositional structure with implicit contrastive features. The construction *Da+NP+de* is triggering an implicit contrastive proposition to convey the contrast information.

Type	Membership Value	Function	Mechanism
B	m(x) = 0	Implicit Contrastive Proposition Trigger	Conventionalization
C	0 < m(x) < 1	Negator	Semantic Feature of Formal Structure

Table 4-5

A considerable number of cases of DND are based on the convention, while other cases like the Type C cases being discussing, depend on the semantic features of the whole formal structure, instead of the meaning of one particular lexical item. Therefore, I consider the formalization progress of DND as a grammaticalization issue. The addressee could get the meaning of contrast even without the awareness of NP's conventional features. In these cases, the DND is more like a **Negator**.

4.4 The Constraints of Time NP and The Issue of Convention

4.4.1 The Constraints of Time NP

Associated with the constraints of the FP events in DND, in this part, the constraints of time NP are discussed briefly. Based on the analysis of DND structure, the main semantic constituents are time NP and propositional event. With the investigations of the constraints of both of them respectively, I propose the constraint situations for the entire structure. Meanwhile, the relations between NP and event are summarized according to the discussion of constraints. The issues of how convention is working and the relations between convention and formalization are illustrated particularly.

As introduced in section 4.1.1, there are some previous works describing the issue of constraint of time NP (Shen, 1996). Most of the studies before have agreed that the time NP in DNC structure should be with the property [+Special] or [+Common]. The [+Special] property indicates that the NP time should

represent (a) particular event(s) that most of the people can connect together. The [+Common] property means that the NP time should be a frequently experienced habitual time. For instance the time NP *xiatian (summer)* is a routine time which most people could understand its indication without particular reminders or explanations, therefore it gets the property of [+Common]. Meanwhile, based on the features of *summer* itself, the NP *xiatian (summer)* is conventionally matched with some particular behaviors such as swimming, eating ice-cream etc. This time-event mapping leads the NP to the property of [+Special].

With the properties [+Special] and [+Common], the NP could build a fuzzy set based on the convention. As discussed before, for all the members in the fuzzy set, Type C events can form good sentences which means the DND structure is quite formalized in some way. Concentrating on the NP itself, if the NP is indicating time without the properties of [+Special] and [+Common], NP does not trigger a commonly known convention knowledge; thus, can it be used in DND construction?

The previous studies answered No to this question. I admit that

the lack of convention will lead to a failure of the fuzzy set modeling but it will not lead to the failure of combination of NP and DND construction. The [-Special][-Common] NP can make good sentences with the DND construction as seen in the sentence groups provided earlier, such as (4-1) to (4-4).

Xiatian (summer)/ dongtian (winter): [+ Special] [+ Common]

Chuntian (spring)/ qiutian (autumn): [- Special] [- Common]

(4-1) *Da xiatian de, ni zenme dai pi maozi.*

Da summer de, you why wear leather cap.

Da xiantian de, why you are wearing a leather cap.

(4-2) *Da dongtian de, ta yao chuqu youyong.*

Da winter de, he want go out swim.

Da dongtian de, he wants to go swim.

(4-3) *Da chuntian de, xiong hai mei xing ne, nimen jiu kaishi nao le.*

Da spring de, bear yet not wake SFP, you already start fight Prc.

Da chuntian de, even the bear does not wake up yet, you guys already start fighting.

(4-4) *Da qiutian de, women zaodian huiqu, yao xiadi ganhuo ne.*

Da autumn de, we early go back, need go-to-the-field work SFP.

Da qiutian de, let's go back early, we need to go to the field to do

farm work.

There are some NPs maximally with the properties [-Special] and
[- Common] comparing *chuntian (spring)/ qiutian (autumn)* as
seen in sentence (4-13).

(4-13) *Da jiuyiba de, dianshitai zenme fang riben dianying.*

Da September 18th de, tv channel why broadcast Japanese movie.

Da jiuyiba de, why is the tv channel showing a Japanese movie.

This sentence means on the day of September 18th, the TV should
not broadcast anything related to Japan. The time September 18th
is one particular day without the common property, but not
special enough either. But in this context, the speaker and
addressee can still communicate well, even though the addressee
is not aware of the related history event, he or she still can get the
meaning that "the TV showing the Japanese movie is wrong for
today" from the speaker.

Based on this observation, I propose that the NP with [-Special] and [-Common] can be used with DND structure. There are no particular constraints for NP[3]. Although I do admit that the NP with conventional knowledge requires less effort from the conversation participants. But I am insisting that the contrastive reading for DND is coming from the whole formal structure instead of one particular piece of background knowledge of any lexical item. Under the circumstances of [-Special][- Common] NP, the extra efforts required from the addressee will not obstruct the understanding of the contrastive reading from DND structure.

This observation can be another piece of evidence supporting the assumption of the formalization of DND structure. Associated with the previous investigation of Type C event, I researched the constraints of NP and event respectively, and found that the conventional connection is not a necessary requirement for DND usage. Furthermore, the entity of the entire structure is to express the contrastive information with the implicit proposition(s). This recognition supports that the DND functions as a formal structure

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[3] If there is any constraint for NP, I admit that the NP with ordinal numeral information or relative account cannot been used in DND structure. Such as *diyitian (the first day), zuotian (yesterday)* etc., since this kind of NP does not have a clear property indicating conventional knowledge or particular event.

trigger.

4.4.2 The Issue of Convention

Finally, this section discusses the last issue in this chapter, convention. Just like the previous investigations, the convention reading is not a necessary requirement of the usage of DND. Considering the concept of convention (Lewis, 1969; Strawson, 1964) as shown below, I provide a brief analysis of convention and non-convention.

Definition of Convention (Lewis, 1969)

A regularity in the behavior of members of a given group who repeatedly find themselves confronted by a problem of co-ordination, who solve this problem in one of several possible ways, and in return expect the same response by others in the group.

According to the notion of convention, the convention is constructed on repetition. For one particular problem or situation, the ways to respond are various. I believe that at the beginning, each way to respond is un-distinguished. Every connection

between the situation and response is spontaneous and temporary. This is the primary form of convention.

While among the various attempts at responding, there are some particular responses that have been repeated most frequently (what I called response C). Hence when the same problem/situation arises again, people can probably easily respond to it with response C and expect others to respond to it in the same way. This response C is the convention.

Now it will not be hard to understand the constraints for the situation of DND then. Convention is the repetition of non-convention. In other words, the essential element of convention is non-convention. Even though for DND construction, the fuzzy set system was utilized to analyze the relation between NP and FP by convention, the convention is not a necessary requirement. The core of convention is objective behavior, not the subjective cognition. Hence even though inevitably related with convention, the DND structure is still a formal structure.

4.5 Summary

In this chapter, the *Da+NP+de* structure within the framework of CPS was discussed. I argued that DND construction is a trigger for an implicit proposition.

Syntactic pattern of DND structure:

DND + Follow-Up Proposition

Semantical pattern of DND structure:

DND + Assumptive Proposition + Contrastive Proposition + Supplementary Proposition

Formula 4-1

Furthermore, the inter-propositional relations were analyzed by investigating the different ways of reading FP. Based on the hypothesis of time-event relation I proposed, the categories of events were proffered. Considering the theory of Fuzzy Set and knowledge of relevance and convention, there were three types of follow-up events and based on this observation and the semantic constraints of FP were demonstrated as well.

Constraint of Da+NP+de Structure

TYPE	Membership Value	Acceptability
A	**m(x)=1**	✗
B	**m(x)=0**	√
C	**0<m(x)<1**	√

Table 4-4

Moreover, I researched the constraints of time NP as well and depending on the observations, the DND structure is a formal contrastive structure with implicit contrastive proposition by DND trigger.

For this whole dissertation, the main hypothesis proposed is the CPS with Trigger in Mandarin. Chapter 3 introduced the bare adverbial trigger case *benlai.* In the Chapter 4, I provided another type of trigger, the construction trigger. DND construction works as a trigger to activate an implicit contrastive proposition, although compared with *benlai* case, the DND case involves the issue of convention.

In this investigation, the DND structure is a formalized structure

whose reading can be obtained without the contribution of any particular lexical item. This conclusion is compatible with the previous conclusion of *benlai*. With the co-demonstration of *benlai* and *Da+NP+de* cases, the Impicit Contrastive Structure Theory can be outlined.

Chapter 5 Other Implicit CPS Triggers

In this chapter, I briefly introduce two other triggers of the implicit CPS. Based on the investigation by Shi and Yao (2014), the function of adverbial *genben* is demonstrated first. In section 1, an introduction of their studies of adverbial *genben* are provided. Meanwhile I attempt to re-construct the structure pattern within the framework of the proposed Implicit CPS.

In section 2, a brief analysis of the adverbial *zhishao* is provided. The propositional structure of *zhishao* is described, as well as a special case of being an entailment marker as well, *zhishao* is an ideal instance to explain the co-existence and co-ordination between entailment and implicit contrastive proposition. Based on these works, I propose that the CPS is a widely applicative concept in Mandarin.

5.1 The Adverbial *Genben* in Assertive Sentence

5.1.1 The Study of *Genben*

Shi and Yao (2014) provided an investigation of the adverbial

genben in an assertive sentence. In most of the cases, *genben* is used in a denial sentence with a negator such as *meiyou, bu*, etc. However, Shi and Yao (2014) noticed that *genben* can be employed in the assertive sentences and convey negative information.

(5-1) *Ni zheyang zuo genben shi dajie.*

You in this way do genben is robbery.

What you are doing is just a robbery.

Shi and Yao claimed that the adverbial *genben* can trigger background information from the uttered sentence. This background information is called background proposition, and the proposition with *genben* in the utterance is local proposition. The background proposition and local proposition are negatively related. The function of the adverbial *genben* is to trigger the background proposition. The background proposition and local proposition are a contrastive pair.

5.1.2 *Genben* as an Implicit Proposition Trigger

Shi and Yao's analysis of *genben* greatly aids the discussion here. The function and property of *genben* being demonstrated is associated with the implicit CPS theory. I agree that the background proposition and local proposition (with Shi and Yao's terms) are contrastively related. Based on their studies, the knowledge that the adverbial *genben i*s a trigger instance for this theory has been ensured.

Like the analysis of *benlai* and *Da+NP+de,* I would like to establish a semantic structure for the *genben* case.

Semantical Proposition Structure of Genben

Background Proposition (BP) + Contrastive Proposition (CP) + Supplementary Proposition (SP)

P + ∼P + Q

Genben triggers a background proposition P and a propositional structure. The whole pattern has at least two constituents, the background proposition and contrastive proposition. In other words, the core semantical account of the structure is the contrastive relation. According to the previous analysis of the opposite lexical theory in this dissertation, a contrastive relation

can be either complements or antonyms. If the situation of contrast is complements, there is only one possibility of the negative background proposition. However if it is antonyms contrast, the negative background proposition has various alternatives. Hence in this case, the supplementary proposition arises.

(5-2) *Ni shuo ni yao guan men, danshi ni zenme meiyou yidian liqi, zhe men genben jiu hai kai zhe.*

You say ni want close door, but you why no little strength, this door genben just still open Prg.

You said you wanted to close the door, but you don't have any strength, and this door is still opening.

(5-3) *ni hua de bushi mao, zhe genben shi yi zhi gou.*

You draw de not cat, this genben is one CL dog.

What you are drawing is not a cat, this is a dog.

In sentence (5-2), the core of BP is "close," the contrastive pair with "close" is "open" only. These two items are complements. While for sentence (5-3), "not a cat" will not lead to "dog" directly, "dog" is one element from the set of "not a cat."

Therefore for the *genben* sentence, I can assume that the well-formed sentence with *genben* is called an utterance proposition. The relations between semantical proposition and utterance proposition are shown below.

The inter-propositional relations for genben structure

Form	*Content*	*Contrast Type*
Utterance Proposition	*Contrastive Proposition*	*Complements* $\sim P = Q$
Utterance Proposition	*Supplementary Proposition*	*Antonyms* $Q \in \{\sim P\}$ $\{\sim P\} = \{Q1, Q2, Q3......\}$

Table 5-1

Hence there are two categories of *genben* sentences. Category 1 is when the inter-propositional relation is a complement relation. The most common example is the usage with a negator, for instance, *genben bushi, genben meiyou*. The other example is without a negator, but the propositions P and Q can be scalarly related. For example, see sentence (5-2):

(5-2) *Ni shuo ni yao guan men, danshi ni zenme meiyou yidian*

liqi, zhe men genben jiu hai kai zhe.

You say ni want close door, but you why no little strength, this door genben just still open Prg.

You said you wanted to close the door, but you don't have any strength, and this door is still opening.

As already known, the concept "close" is absolute, while "open" is not. From "open" to "close," there is a scale. However, in this sentence, the feature of gradability of the "open" is not activated. Even though "open" is not absolute, here "close" and "open" are being treated as a complements pair.

The second category of the *genben* sentence is when the inter-propositional relation are antonyms. The most common example for this category is the scalar sentence like sentence (5-4). And the other interesting case is like sentence (5-3). Even though P and Q are not in the same line of degree, they are sharing some common characters. The situation of (5-3) is quite a typical instance of what contrast means.

(5-4) *Zhe bushi bucuo, genben shi feichang hao.*

This not-be not bad, genben be very good.

This is not just not bad, it is actually very good.

5.2 Two Trigger Functions of *Zhishao*

5.2.1 The Upper-End and Entailment

In this part I provide a brief investigation of *zhishao* within the framework of CPS theory. Unlike the cases of *benlai*, *Da+NP+de* and *genben*, *zhishao* is a numeral-oriented adverbial in some way. Hence *zhishao* can always trigger an entailment.

(5-5) *Wo jintian hua le zhishao wubai kuai.*

I today spend Pfv, at least five hundred money CL.

Today I spent at least five hundred dollars.

Entailment*: I may spend more than five hundred dollars.*

For most of the cases, *zhishao* is being used in the Numeral-Classifier Proposition just like sentence (5-5). While there is a situation where *zhishao* is in an event proposition without numeral-classifier element, entailment can still occur as
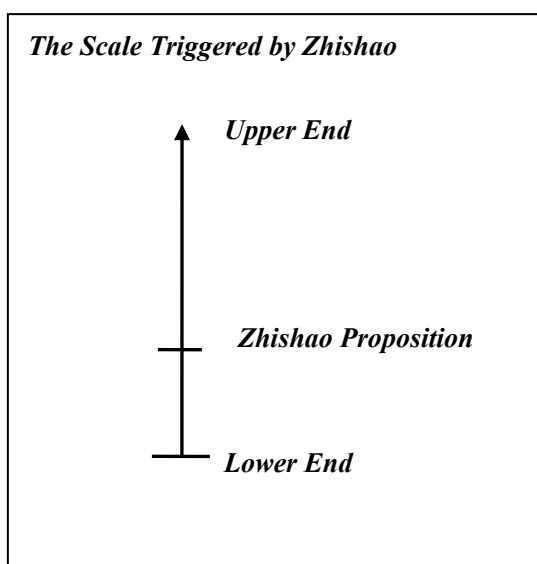
seen below.

(5-6) *Ta meiyou dedao guanjun, danshi zhishao canjia le bisai.*

He not get champion, but at least participate Pfv, competition.

He didn't get to be a champion, but at least he participated in the

competition anyway.

Entailment: *Even though he didn't get to be a champion, he may*

get an alternative position in this competition.

Based on these observation, *zhishao* is assumed to trigger a

gradable scale with a upper-end and a lower-end.

The Scale Triggered by Zhishao

Upper End

Zhishao Proposition

Lower End

Based on this assumption, the entailment of *zhishao* may be

proposed as triggering a contrastive proposition of the upper-end.

5.2.2 The Lower-End and Implicit Proposition

Considering the literal meaning of *zhishao* (at least), there is doubt about whether the constituent *zhishao* marks the lower-end of the scale being proposed. Within the framework of CPS, this doubt can be clarified. According to these observation, *zhishao* proposition is always coordinating with a contrastive proposition which is not the entailment.

(5-6a) *Ta meiyou dedao guanjun, danshi zhishao canjia le bisai, meiyou qiquan.*

He not get champion, but at least participate Pfv, competition, not quit.

He didn't get to be the champion, but at least he participated in the competition anyway, instead of quitting.

Entailment: *Even though he didn't get to be the champion, he may get an alternative position in this competition.*

Contrastive Proposition: *He didn't quit which is even worse than losing the competition.*

On the basis of these investigation, *zhishao* is assumed to be an implicit CPS trigger. The contrastive proposition is the contrast of the lower-end indication, while the entailment is the contrast of upper-end indication.

Structure of Zhishao Triggering Propositions

Utterance Proposition (with trigger) + Contrastive Proposition (+ Entailment)

[Num-CL / Event] (with trigger) + [Contrast of Lower-End] (+ [Contrast of Upper-End])

Formula 5-1

5.3 Summary

In this chapter, two more triggers were introduced for the Implicit CPS theory. Both of them are frequently used adverbials. A wide range of lexical items or constructions in Chinese are being proposed as the implicit contrastive proposition trigger. The analysis of *genben* was based on Shi and Yao's (2014) work. Under the concerns of CPS theory, the propositional structure *genben* triggers has been established and the inter-propositional relations have been investigated as depicted below.

The inter-propositional relations for genben structure

Form	Content	Contrast Type
Utterance Proposition	*Contrastive Proposition*	*Complements* $\sim P = Q$
Utterance Proposition	*Supplementary Proposition*	*Antonyms* $Q \in \{\sim P\}$ $\{\sim P\} = \{Q1, Q2, Q3......\}$

Table 5-1

As for the *zhishao* case, the entailment and the implicit contrastive proposition were analyzed together. This situation provides support for the theory discussed in Chapter 2. The co-occurrence of entailment and CP with the same trigger ensures the existence of CP and related structure.

Structure of Zhishao Triggering Propositions

Utterance Proposition (with trigger) + Contrastive Proposition (+ Entailment)

[Num-CL / Event] (with trigger) + [Contrast of Lower-End] (+ [Contrast of Upper-End])

Formula 5-1

Chapter 6 Conclusion

This dissertation sought to examine the relations between constituents and meaning of semantical propositions. The basic concepts of implicit propositions, entailment, presupposition and implicature were discussed. Concerning the possibility of distribution of proposition functional features, it was hypothesized that there can be a new type of implicit proposition which is [+ Uncontroversial] and [- Lexicon-Sensitive]. To make this concept more specifically, this proposition is [-semantically-triggered] but [+syntactically-triggered]. This was the basic theoretical supporting evidence for this dissertation.

Classification of Implicit Propositions

Property		*Example*	
Uncontroversial	*Lexicon-Sensitive*		
+	+	*+ context*	*Entailment*
		- context	*Presupposition*
+	—	*Hypothesis ???*	
—	+		
—	—	*implicature*	

		implicature	entailment	presupposition	hypothesis
Trigger-sensitive		—	+	+	+
	Semantically-triggered	+	+		—
	Syntactically-triggered	—	—		+

Based on this knowledge, two detailed analysis of *benlai* and *Da+NP+de* were provided; furthermore, the adverbial *genben* and *zhishao* was investigated briefly as well. Among the analysis of all cases, a number of issues were discussed, for example convention, contrast, negation etc. When these cases were thoroughly investigated, the whole picture became clear too.

From all these studies, the implicit CPS was proposed as depicted below.

Implicit Contrastive Proposition Structure:

(1) Formalization of the Structure:

In semantical account

Inner Proposition + Contrastive Proposition

In syntactic account

Utterance Proposition + Follow-Up Proposition

(2) Trigger

Adverbial, Construction, etc.

(3) Inter-Propositional Relation

Contrast (Complements, Antonyms, etc)

It is believed that this theory provides a fresh perspective for understanding the meaning of Chinese adverbials. It also helps to clarify some theoretically missing problems about implicit propositions such as presupposition, entailment and implicature as well. To quote the famous Sherlock Holmes,

When you have eliminated the impossible, whatever remains, however improbable, must be the truth.

Even if all the occurring concepts were not suitable for these cases perfectly, maybe they provide a new explanation for a considerable solution. While this theory is not perfect, I still hope

this story may be suitable for more Chinese adverbials, or other

Chinese dialect, even different languages. This would be the next

research mission for us.

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