

修士論文

A+I 構造と非対称格仮説理論

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指導教員 原田 なをみ 准教授

人文科学研究科 人間科学専攻 言語科学分野

1 5 8 6 4 1 0 2 張 岩

The A+I construction and Unaccusative Hypothesis

Abstract

This thesis is to study the connection between the Chinese A+I construction (the accusative plus infinitive construction) and Unaccusative Hypothesis under the framework of Generative Grammar. We demonstrate generative syntactic positions of the nominal after the matrix verb, as well as their thematic roles through making an analysis of the English A+I construction. In this thesis we argue that the essential differences between Chinese control structure and the raising structure in the A+I construction lie in the distinction between the unaccusatives and the unergatives. We divide this construction into two types. One criterion is the attributes of matrix verbs, and the other is whether the structure of the entire sentence is control or raising. In the first type, the matrix verb is an unergative with a control structure and it denotes the agent-centered event. In the second type, the matrix verb is an unaccusative with a raising structure and it denotes a theme-centered event. Furthermore, the existence of empty category, the PRO and the NP-trace will solve the thematic overlapping phenomena in which the one nominal has two θ -roles in the complex event structure.

This thesis will be organized as follows. In chapter 1, we introduce the claim of this thesis. In chapter 2, we will review previous studies of the A+I construction in English. It introduces the Raising to Object (RtoO) and the Exceptional Case Marking (ECM) analysis. In chapter 3, we find that the A+I construction in Chinese also has the same property as infinitival clauses in English. Moreover, the characteristics of this construction and the classification of this construction in our study are described. In chapter 4, Chomsky's empty category theory (1981), especially NP-trace and PRO will be introduced. Then we will make a review of the study about the control structure and the raising structure. What is more, the connection between the control verb and the unergative verb as well as the connection between the raising verb and the unaccusative verb will be proved. In chapter 5, we demonstrate how our propose works for the control structure and the raising structure in the Chinese A+I constructions respectively. By virtue of the CAUSE-PROCESS-RESULT model of the complex causative events (Folli, 2002), we will analyze the thematic overlapping phenomena. Meanwhile, the empty category PRO in the control structures and the NP-trace in the raising structures will solve this problem, and lastly we will conclude this thesis.

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Chapter 1 Introduction

1.1 The Statement of this Thesis

The purpose of this thesis is to study the connection between the Chinese A+I construction, which consists of the accusative verb plus an infinitive clause and Unaccusative Hypothesis under the framework of Generative Grammar. Few previous studies on this construction have been done by using Unaccusative Hypothesis. In order to provide a new view to the study of the Chinese A+I construction, this study argues that the generation of the Chinese A+I construction is connected to unaccusativity of the verb. What is more, through making an analysis of the English A+I construction, we demonstrate generative syntactic positions of the nominal after the matrix verb, as well as their thematic roles. In this thesis we argue that the essential differences between Chinese control structure and raising structure in the A+I construction is the distinction between unaccusatives and unergatives. In order to make an explanation for our assumption, we will demonstrate the data of Chinese the *v-de* construction, as one part of the A+I construction in Chinese, on the basis of Unaccusative Hypothesis, we divide this construction into two types. One criterion is the attributes of matrix verbs, and the other is whether the structure of the entire sentence is control or raising. In the first type, the matrix verb is an unergative with a control structure and it denotes a agent-centered event. For the second type, the matrix verb is an unaccusative with a raising structure and it denotes a theme-centered event. Furthermore, the existence of empty category, the PRO and the NP-trace will solve the thematic overlapping phenomena that is one nominal has two θ -roles in the complex event structure.

1.2 The Outline of this Thesis

In order to give an explanation to our assumption, and to provide a solution to the thematic overlapping problem which refers to the situation in which one nominal has two θ -roles, this thesis will be organized as follows. In chapter 1 we introduce the claim of this thesis. In chapter 2, a previous explanation is made on the A+I construction, then we will review previous studies of the A+I construction in English. It introduces the Raising to Object (RtoO) and the Exceptional Case Marking (ECM) analysis. In chapter 3, we find that the A+I construction in Chinese also has the same property as infinitival clauses in English. Moreover, the characteristics of this construction and the classification of this construction in our study are described. In chapter 4, first

Chomsky's empty category theory (1982), especially NP-trace and PRO will be introduced. Then we will make a review of the study about the control structure and the raising structure, from the syntactic and the semantic perspectives. What is more, the connection between the control verb and the unergative verb as well as the connection between the raising verb and the unaccusative verb will be proved. In chapter 5, we demonstrate how our proposal works for the control structure and the raising structure in the Chinese A+I constructions respectively. By virtue of CAUSE-PROCESS-RESULT model of the complex causative events, we will analyze the thematic overlapping phenomena. Meanwhile, the empty category PRO in the control structures and the NP-trace in the raising structures will solve this problem, and we will conclude this thesis.

Chapter 2 The A+I construction

Introduction

In this chapter, first a general explanation is made with regard to the A+I construction (the accusative plus infinitive construction) and this term will be used frequently in this thesis. According to Huang (1984), there are infinitive constructions in Chinese, and one of this constructions is the *v-de* construction, which will be the object of this thesis. Furthermore, we will review previous studies of the A+I construction in English. It introduces the Raising to Object (RtoO) and the Exceptional Case Marking (ECM) analysis. In the Raising to Object analysis of the A+I construction, it is believed that at an initial stage of the derivation of the sentence the post-verbal NP is in the subject position of the embedded clause, and subsequently as part of the syntactic derivation, a transformation under clarification moves that embedded subject up to the direct object position of the main clause. In the ECM (Exceptional Case Marking) approach, it is the main verb that exceptionally assigns accusative Case to post-verbal NP which is not its thematic direct object. Meanwhile, we will list some superficial syntactic characteristics of two types analyses, and then make a further analysis with a view to marking an account of the two types of approaches respectively.

2.1 Finite and Infinite Constructions

In the generative literature, the distinction between finite and infinitival clauses is made by the values [+/-TENSE] and [+/-AGR] in English. Finite clauses are realized by [+TENSE] and [+AGR]. The infinitival marker is the morpheme *to*. However, Mandarin Chinese is a language with few morphological markings. Whether the

complement clauses are finite or infinite have been discussed rather widely. Because there is no indication of grammatical tense on the verb and there are also no overt complementizer. Thus there is no obvious way to distinguish a finite clause from an infinitival clause. This makes it a challenge to distinguish between different types of clauses.

Huang (1984) states that different languages may have different ways to distinguish finite and infinitival clauses, and the distinction in Chinese can be made on the basis of the potential occurrence of the modal or the aspectual element of the auxiliary category. According to Huang, there are two types of verbs in Chinese: one type of verbs, which can be followed by a finite clause, including verbs such as *shuo* ‘say’, *zhidao* ‘know’, *gaoshu* ‘tell’, etc, is named the *say*-type. The other type of verbs, which can be followed by infinite clauses, including verbs like *zhunbei* ‘prepare’, *shefa* ‘try’, *quan* ‘persuade’, *chi-de* ‘eat’, *zui-de* ‘drunk’, *bi* ‘force’ etc, is named the *persuade*-type. If a clause contains a *persuade*-type verb, a modal auxiliary cannot occur in its embedded clauses, and the embedded clauses cannot take aspects such as *zhe*, *liao*, *guo*, etc. The embedded clauses in the *persuade*-type clauses are assumed to be of infinitival clauses. Chinese modals like *hui* ‘will’, *neng* ‘will’, etc, and the tense markers such as *zhe*, *liao*, *guo*, etc, cannot appear in Chinese infinite clauses. It is shown in the following:

Firstly, Huang’s explanation about the existence of the aspect *le* in the infinitive is inadequate because the infinite clauses are characterized as [-TENSE] and [-AGR], whereas the aspect *le* or modal auxiliary *hui* is realized by [+TENSE] and [+AGR].

(1)

- | | | | | | | | |
|---|-------------|---------|--------|-----|----------|---------|-------|
| a | na wan | mian | chi-de | ta | yi tou | da han | |
| | that | noodles | eat | he | one head | sweat | |
| | eating that | noodles | made | his | head | full of | sweat |
| | | | | | | | |
| b | *na wan | mian | chi-de | ta | yi tou | da han | le |
| | that | noodles | eat- | he | one head | sweat | PE |
| | eating that | noodles | made | his | head | full of | sweat |

Secondly, the infinitival clause cannot exclude the modal auxiliary *hui* in it.

(2)

- | | | | | | | |
|----|-----|-----------|----------|--------|---------|-------------|
| a. | wo | quan | Zhangsan | mai | zhe-ben | shu |
| | I | persuade | Zhangsan | buy | this-CL | book |
| | I | persuaded | Zhangsan | to buy | this | book |
| | | | | | | |
| b. | *wo | quan | Zhangsan | hui | mai | zheben shu |
| | I | persuade | Zhangsan | will | buy | thisCL book |
| | *I | persuaded | Zhangsan | will | to buy | this book |

Above all, we determined that there are infinitival clauses in Chinese, that the clauses contain a *v-de* verb as part of infinitival embedded clause will be described in details

later. In the next section we will first introduce the A+I construction in English.

2.2 The A+I construction in English

This section is about previous studies of the A+I construction in English. It introduces the Raising to Object (RtoO) approach and the Exceptional Case Marking (ECM) approach. The first analyses given to the A+I construction in the generative literature is endorsed by Rosenbaum (1967). Thereafter, Postal (1974) had kept improving and developing the Raising to Object analysis. All of these analyses share the intuition that at the relevant level of representation of the second NP is a direct object of the matrix verb and at some other level of representation it is a subject of the embedded verb. A second type of analysis given to the A+I construction is called the Exceptional Case Marking (ECM) account. The seed of this approach is found in Chomsky (1971). This approach agrees with the Raising to Object account in that the post-verbal NP is an embedded subject initially. However, this claim assumes that at surface structure the post-verbal NP is still in the embedded subject position.

2.2.1 Characteristics of the Raising to Object

The earliest transformational approach to the A+I construction was the Raising to Object analysis by Postal (1974). In its essentials it has the following characteristics. At an initial stage of the derivation of the sentence the post-verbal NP is in the subject position of the embedded clause, as in (3a). As part of the syntactic derivation a transformation moves that embedded subject up to the direct object position of the main clause as in (3b). Hence this construction is named the Raising to Object.

(3) a. Mike proved [[Sam] to be innocent].

b. Mike proved [Sam] [_to be innocent].

How does this analysis handle the basic properties of the A+I construction outlined above? Since *Sam* is in subject position at the deep structure, and the deep structure was considered as the level of representation where semantic role assignment takes place, the fact that *Sam* is semantically the subject of *to be innocent* is accounted for. Then *Sam* raises to the main clause to become the direct object of *proved* in syntax. The Passivization was thought to be a grammatical function changing operation that rearranged the subject and direct object arguments of a transitive verb, marking the direct object and marking a kind of nominative and the subject a kind of oblique.

Since Raising to Object creates a transitive predicate by providing the main clause verb with a direct object, the Passivization can then successfully apply. Consider the derivation sketched in (4).

- (4) a. Cindy believes [Marcia to be genius].
 b. Cindy believes Marcia [_to be a genius].
 c. Marcia is believed (by Cindy) [_ to be genius].

Marcia is the embedded subject initially, as in (4a). Then it raises to the object position of the main clause, as in (4b). Finally, the Passivization applies and *Marcia* winds up with the subject of the passivized verb in (4c).

The Raising to Object analysis also has a straightforward account for the Case-marking facts, since at the surface structure where Case-marking is determined, the initially embedded subject is a direct object with accusative, and not with nominative Case.

- (5) Cindy believes her /*she [_to be a genius].

Further, the reflexive facts also follow from the Raising to Object account. A reflexive NP is licensed if it has a c-commanding clause-mate antecedent. Since the Raising to Object takes an embedded argument and makes it a clause-mate of the subject of the main verb, the conditions for licensing a reflexive are met.

- (6) Cindy_i believes herself_i / *her_i [_to be a genius].

Above all is the study of the Raising to Object account. In the next subsection we will review the gist of the ECM approach.

2.2.2 Characteristics of the Exceptional Case Marking

The seeds of the Exceptional Case Marking approach are found in Chomsky (1981). This approach agrees with the Raising to Object account in that the post-verbal NP is an embedded subject initially. However, its claim is that at surface structure the post-verbal NP is still in the embedded subject position. (7) and (8) schematizes the analysis of the ECM approach.

- (7) Cindy believes [Marcia to be a genius].
 (8) Cindy believes [Marcia is a genius].

Chomsky notes that a crucial difference between (7) and (8) is the finiteness of the embedded clause. One special characteristic of this construction, according to the ECM approach, is that the verb exceptionally assigns Case to the NP *Marcia*, which is not its thematic direct object. He proposes the Tensed-S Condition, which blocks rules like passivization and reflexivization from relating elements within a tensed clause to elements outside of that clause. Chomsky (1981) introduced the Exceptional Case

Marking approach to the A+I construction. It had in common with his earlier analysis the intuition that the verb bears a particular structural relationship to certain sufficiently close NPs. A verb governs its sister direct object and it also governs the subject of its infinitival sister clause. It does not govern the embedded subject of its finite sister clause. This relationship is called government. The claim is that a finite clause node is a barrier to government, additionally, the main verb in the A+I construction can assign accusative Case to the embedded infinitival subject, which is exceptional, in that a verb usually only assigns accusative Case to its own thematic object.

Chomsky (1981) claims that the example (9) to be the ECM construction.

(9) They supposed the children to be guilty.

He says that the post-verbal NP is an embedded subject initially and remains in the embedded subject position. And the example (10) would have the bracketing indicated throughout the derivation.

(10) They supposed [the children to be guilty].

The post-verbal NP does not undergo any movement throughout the derivation. This claim is supported by the Theta Criterion. The Theta Criterion stipulates that each argument can be assigned one and only one θ -role. Chomsky (1981) later asserts that all complement positions are theta-positions. Since the complement subject receives a θ -role from the embedded clause, movement to matrix object position results in assignment of two θ -roles to the same argument, a violation of the Theta Criterion. Thus, movement is blocked.

2.3 Evidence for the two Approaches

The crucial difference between the two approaches hinges on the treatment of the post-verbal NP with respect to the surface syntax. This part discusses the evidence of the Raising to Object analysis and the ECM approach respectively.

2.3.1 Evidence for the Raising to Object

Arguments that show the NP to indeed be part of the main clause in the surface syntax is an argument in favor of the Raising to Object account. One simple argument of this type comes from adverb placement. If the post-verbal NP were in the embedded clause one might expect a main clause adverb to be able to intervene between the main verb and the post-verbal subject. This is not possible, as is well-known in Bresnan (1976).

(11) Alice believes (*strongly) Sam to be the best butcher in town.

Another more complicated argument is put forth in Postal (1974). It involves the interpretation of adverbs. Consider these examples.

- (12) a. Mike expected Greg incorrectly to take out the trash.
b. *Mike expected Greg incorrectly would take out the trash.

In the A+I construction example in (12a) the adverb *incorrectly* can have a reading in which it modifies the main verb. Indeed, that is probably the favored reading. In the full finite clause in (12b) the adverb sounds awkward. If it is inverted with the modal *would* it can be interpreted as modifying the embedded predicate. If the interpretation of an adverb is determined by its surface position then this contrast can be taken as an argument for the Raising to Object approach. For the adverb *incorrectly* is interpreted as modifying *expected* it must be in the same clause with *expected*. If it is in the same clause as the verb, then the NP between the verb and the adverb must also be in that clause. Therefore, the post-verb NP is in the main clause.

Another argument, perhaps slightly more straightforward, a piece of evidence in favor of the claim that the postal verb NP in the A+I construction is indeed part of the main clause comes from the particle construction. Kayne (1984) points out examples like the following and argues that they show that the post-verb of the NP is within the surface of the main clause.

- (13) She made Jerry out to be famous.

On the assumption that *make* and *out* are both uncontroversially in the main clause, since *Jerry* appears between them, it must be part of the main clause.

2.3.2 Evidence for the Exceptional Case Marking

Several arguments against the Raising to Object account have been proposed over the years. Chomsky (1981) argues that if the post-verbal NP is indeed syntactically a direct object, then we cannot explain the contrast between (14a) and illicit (14b) and (14c).

- (14) a. Which famous singer does Marcia always believe [gossip about_].
b. *Which famous singer does Marcia believe [gossip about_] to have ruined his career?
c. * Which famous singer does Marcia believe that [gossip about_] has ruined his career?

He suggest that examples like (14b) and (14c) are examples of illicit extraction from the subject position, while (14a), being extraction from object, is fine. Postal (1974) responded to this criticism by claiming that the condition which blocks extraction from

subject is actually a condition on extraction from a phrase that has been a subject at some point in the derivation, even the Raising to Object analysis assumes that the post-verbal NP is an underlying subject.

Another argument against the Raising to Object approach also comes from adverb placement, this time the ECM approach seems to make the right prediction like in Bresnan (1976).

(15) a. Alice believes Sam (*strongly) to be the best butcher in town.

b. Alice believes strongly that Sam is the best butcher in town.

If the post-verbal NP is indeed part of the main clause, why is it not possible to place this main clause adverb after the supposed main clause direct object? Runner (1995) attempts to explain this by comparing (15a) to (15b).

(16) a. Alice strongly believes Sam's story.

b. *Alice believes Sam's story strongly.

The example in (16a) shows that *strongly* can modify *believe*, but (16b) shows that it cannot appear post-nominally. The adverbs that are often used to illustrate the contrast in (16) do not behave well post-nominally even when the post-verbal NP is uncontroversially a direct object.

The third argument that Chomsky (1971) makes against the Raising to Object approach involves the movement. The movement is usually assumed to target various kinds of objects, but not subjects.

(17) a. It is easy to believe Bobby saw Big Foot.

b. *Bobby is easy to believe [_ saw Big Foot].
(cf. it is easy to believe Bobby saw Big Foot.)

However, the post-verbal NP in the A+I construction cannot undergo the movement. This is unexpected if it is a direct object, but is expected if it is a subject.

(18) *Bobby is easy to believe _ to have seen Big Foot.
(cf. it is easy to believe Bobby to have seen Big Foot.)

Here the Raising to Object analysis cannot explain why the direct object does not undergo certain phenomena which usual direct objects undergo. The ECM analysis simply points out that these NPs are subjects, not objects, and hence the contrasts follow straightforwardly.

Chapter3 The A+I construction in Chinese

Introduction

In the literature of Chinese linguistic, the syntactic phenomenon of the A+I construction has aroused great interests from the grammarians since the last century. As early as in 1940s, alongside infinitival clauses with objective subject in English, we find that it also has the same property of the A+I construction in Chinese that it carries an infinitival complement clause with an objective subject, for example, the *v-de* construction (NP1 + V + *de* + NP2 + VP) is one type of the A+I construction in Chinese. This thesis discusses the *v-de* construction relying on Unaccusative Hypothesis. As for the semantic aspect, when the structure of the *v-de* construction is a control structure, the main verb is similar to the unergative verb, which is the same similarities formed with the raising structure and the unaccusative verb. And we argue that this connection exists in Chinese linguistic facts especially in the *v-de* construction. In this chapter, the characteristics of this construction and the classification of this construction in our study will be discussed. Our claim is made based on Unaccusative Hypothesis and the study of Huang (2007).

3.1 The Character of the A+I construction in Chinese

For one part of the A+I construction, the *v-de* construction, Li Linding (1963) puts forward that adjectives and verbs before *de* must be spoken, which means that the *v-de* construction mostly indicate speaker's subjectivity and are used in spoken language. Nie Zhiping (1997) advances that the *v-de* constructions occur in literary style with the lightest frequency and few occur in official style. Therefore, most of the *v-de* construction come from spoken styles, and they are easily found in our oral language. As known to us, the *v-de* construction in Chinese include many kinds of forms, and some scholars have made a classification of different forms. We will introduce them in (19)-(21).

(19)

- a. ni shuo-de tai kuai
 you speak-de too quick
 You speak too quickly

- b. ta zhang-de zhen piaoliang
 she grow-de real beautiful
 What a beautifu girl she is

(20)

- a. ta qi-de lian se fabai
he angry-de his face pale
He was so angry that his face turned pale
- a. ta ku-de yan jing zhong
she cry-de eyes turgid
She cried to be turgid eyes

(21)

- a. wo qi-de ta lian se fa bai
I angry-ed his face pale
What I done made his face pale
- b. wo gan dong-de mama liu chu yan lei
I moved-de mom came to tears
I moved mom to came to tears

From the instances shown above, we can find the syntactic structures of these *v-de* constructions are more and more complex and the representations after *de* are longer and longer from (19)-(21). Although many scholars make an analysis of the syntactic structures with the *v-de* construction, some scholars who argue for the existence of an infinitival clauses in the *v-de* construction make a further study towards this construction. The instance (21) is our object of this study, and its syntactic structure and semantic features are the most complex, which arouses broad controversies. And some of the scholars approve that it is the infinitival clause contained in the *v-de* constructions. The linear representation of our object can be written as “NP1 + V + de + NP2 + VP”. The NP1 and NP2 are nominals, and NP1 is the subject of the whole sentence. V is a verb or an adjectival predicate and VP is a predicate which is the statement of NP2. The existence of the causative meaning in “NP1 + V + de + NP2 + VP” has been in agreement among most scholars. The causative structure is a complex event structure and contains two events which are the causing event and the caused event. Thus, its semantic construction can be shown as: “causer (NP1) + predicate of the causing event (V de) + affectee (NP2) + predicate of the caused event (VP). Our object of type (21) has two features. Firstly, NP1 and NP2 are not in possessive relations. Secondly, the semantic denotation of VP is towards NP2, which denotes state of NP2 or action of NP2.

3.2 Previous Studies

We have introduced the syntactic and semantic features of our corpora above. In the following section, previous studies with respect to Unaccusative Hypothesis, will be reviewed firstly, then Huang (2007) applies the dichotomy to analyze the *v-de*

construction in his articles. We agree with the assumptions of Huang. Thus, we use Unaccusative Hypothesis to analyze Chinese *v-de* constructions, especially “NP1 + V + de + NP2 + VP” with the two features we prescribed before. The typology of the Chinese *v-de* construction is on the basis of the works by previous scholars which pave the way for our assumption.

3.2.1 Review of Unaccusative Hypothesis

Perlmutter (1978) proposes Unaccusative Hypothesis in the framework of Relational Grammar. There are two types of intransitive verbs: one is known as unaccusative verbs and the other is known as unergative verbs. Perlmutter (1978) points out that unaccusative verbs and unergative verbs are one-place predicates. However, the surface subject of an unaccusative verb is the logical deep object, while the surface subject of unergative verb is also the deep subject. Later, Williams (1981) and Burzio (1986) point out that both of the two kinds of verbs include a sole argument. The difference is that the sole argument of an unaccusative verb is its internal argument, while the sole argument of unergative verb is its external argument. According to Government and Binding Theory, the sentences with unaccusative verbs are regarded as those without objects, whereas the sentences with unergative verbs are regarded as those without subjects. We will explain what Unaccusative Hypothesis is with the following examples.

(22) a. Mary arrived.

b. Mary jumped.

The two sentences seem similar with regard to syntactic structure: verbs *arrive* and *jump* both have a sole argument *Mary*. However, there is a significant difference between the two verbs. Perlmutter (1978) proposes that their arguments are in different starting position in the structure. The structure of (22a) and (22b) are illustrated as below.

(23) a. [e[**vp** arrived Mary]]

b. [Mary [**vp** jumped]]

As is seen from the structure, the sole argument of *arrive* is its internal argument, which is in the position of object in structure. However, the sole argument of *jump* is its external argument, which is in the position of subject.

3.2.2 Review of Hunag (2007)

Huang (2007) demonstrates how thematic projections and syntactic structures of verbs in Chinese are related. He proposes that the unaccusatives and the unergatives can be

divided into three kinds according to the number of their arguments, as follows

(24)

predicates	dichotomy	Deep structure
one-place predicates	unaccusative verb	[vp V NP]
	ungerative verb	NP [vp V]
two-place predicates	unaccusative verb	NP [vp V NP]
	ungerative verb	NP [vp V NP]
three-place predicate	unaccusative verb	NP [NP [vp V NP]
	ungerative verb	NP [vp NP [V NP]

(24) shows the contrast of the unaccusatives and the unergatives within the framework of Government and Binding. The subject of the unaccusative verb is base-generated in the position of object, and moves to the subject. The reasons of movement can be analyzed as followed. First, the unaccusative verb cannot assign Case to its internal argument, whereas the Case Theory demands the nominal must have Case, so it moves up to obtain its Case. Second, the movement of the object is also demanded by the EPP (Extended Projection Principle), that is the clause must have subject. Thus, for the unaccusatives, the internal argument is base-generated, but external argument of the unergatives is base-generated. Huang (2007) argues that the unaccusative series and unergative series represent two types of the events. The unaccusative series represent the patient-centered events which mainly depict state. However, unergative series stand for the agent-centered events which focus on action. Besides, Huang proposes that the order of thematic roles when projecting to syntactic structures. The order of the θ -roles is shown in the table.

(25)

predicates	dichotomy	Internal arguameng	Middle argument	external argumennt
one-place predicate	unaccusative	theme		
	ungerative			agent
two-place predicate	unaccusative	theme		experiencer or causer
	ungerative	theme		agent
three-place predicate	unaccusative	theme	experiencer	causer
	ungerative	theme	affectee	agent

In the table (25), we have found that the middle argument of unaccusatives is assigned the experiencer θ -role because it is base-generated in subject position, and that the unergatives is assigned affectee because it is base-generated in object position. Huang mentions the matrix verb of *zui-de* in the sentence *zhe ping jiu zui-de Zhangsan zhan bu qilai*, which is as the unaccusative verb. Besides, he regards the main verb of the sentence *Zhangsan ku-de Lisi hen shangxin*, *ku-de* as unergatives. Huang's study, especially his division on predicates into the unergatives and accusatives, sheds light

on the study of The Chinese A+I construction, especially in that it supports the analysis in which the *v-de* construction is divided into two types, (i) the control structure with an unergative verb as main verb and (ii) the raising structure with an unaccusative verb as the main verb.

3.3 The Classifications of the Chinese A+I construction

According to Huang, we divide this type the A+I construction into two types. The criterion is the dichotomy of the unergatives and unaccusatives. The distinction of these constructions is whether matrix verb is unergative or unaccusative. The results of classification are as follows.

(26)

- | | | | | | |
|---|------------|----------------|------|-------------|------------------|
| a | Zhangsan | ku-de | Lisi | hen | shang xin |
| | Zhangsan | cried-de | Lisi | very | sad |
| | The cry of | Zhangsan | made | Lisi very | sad |
| | | | | | |
| b | ta | chang-de | wo | xin li | hen fan |
| | she | singed-de | I | in heart | very discomposed |
| | her | sing song made | me | discomposed | |
| | | | | | |
| c | ni | shuo-de | wo | xin li | mei di |
| | you | said-de | I | in heart | not confident |
| | What you | said made | me | unconfident | |

(27)

- | | | | | | | | |
|---|------------|----------|------------|----------|---------|----------|----------|
| a | zheping | jiu | zui-de | Zhangsan | zhan | bu | qi lai |
| | this | wine | drunk-ed | Zhangsan | stand | not | up |
| | The wine | made | Zhangsan | so drunk | he | cannot | stand up |
| | | | | | | | |
| b | mingtiande | kaoshi | chou-de | ta | shui | bu zhao | jiao |
| | tomorrow | exam | worried-de | he | sleep | not | |
| | The exam | tomorrow | made him | worried | that | he can't | sleep |
| | | | | | | | |
| c | zhe jian | shi | ji dong-de | Lisi | liu xia | yan lie | |
| | this | matter | excited-de | Lisi | come to | tears | |
| | this | matter | made Lisi | excited | that he | come to | tears |

Along with Huang we argue that the matrix verbs in (26) are unergatives, in (27), the main verbs are all unaccusatives. All of the matrix verbs in the two groups are three-place predicates. The construction (26) is an agent-centered event and is used to denote the action of the agent. The constructions (27) are theme-centered events and is used to depict the state.

In this chapter we showed the features of the two types from the data, which will be the basis of our later study.

Chapter 4 Control Structure and Raising Structure

Introduction

In this chapter, we will briefly review the control structure and the raising structure. First, Chomsky's Empty Category Theory will be reviewed. Then, from the syntactic and semantic perspectives, we will review features of control structures and raising structures respectively in 4.2. The similarities of the control verb and unergative verb, raising verb and unaccusative verb will be introduced in details in 4.3. What is the control structure and what are its features? The same problem also refers to the raising structure. Furthermore, whether the control verb is connected to unergative verbs, and whether the raising verb relates to unaccusative verbs are crucial to our study. All of these problems will be introduced in this chapter.

4.1 A Review of the Empty Category Theory

Chomsky (1981, 1982) distinguishes empty category and lexical category under the framework of Government and Binding. Empty categories are null in the phonetic form but play an important part in the syntactic and semantic structures. Chomsky differentiates four types of empty categories according to [\pm anaphor] and [\pm pronominal] features, as is shown in (28).

(28)

empty	anaphor	pronominal
NP-trace	+	-
pro	-	+
variable	-	-
PRO	+	+

In this thesis we will just introduce two empty categories, PRO and NP-trace, which are crucial to our later study. In the light of the Binding Principles, PRO is a pronominal

anaphor so it must be free in its governing domain. Thus it cannot have a governing category. In order to solve this contradiction, Chomsky proposes the PRO Theorem, which regulates that PRO must be ungoverned. Therefore, PRO can only occur in the position of subject in the infinitive structures. Furthermore, the distribution of PRO is explained by the control theory instead of Binding Theory.

PRO is a base-generated empty category, and it is controlled by its antecedent, which is also called its controller. The controller occupies the θ -marked A-position. Besides, PRO is non-case-marking, and its null Case feature is checked by the head of infinitives *to*. Hence PRO and the head *to* of infinitives are in the spec-head position.

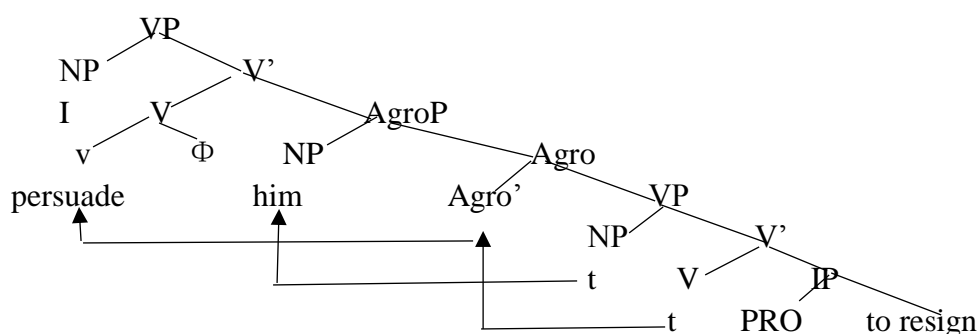
NP-trace is a movement-generated empty category, and it is bounded by its antecedent which occupies the non- θ -marked A-position. What's more, NP-trace is also non-Case-marking and can assume θ -role, which are the same as PRO with this respect. NP-trace is the trace left by the movement of nominal constituent. In English, NP-traces mainly refer to the traces left by subject-raising and passivization occurring by moving the complement to the subject.

4.2 Syntactic Features of Control Structure and Raising Structure

4.2.1 The Analysis of Control Structure

The concept of control was first proposed by Postal in 1970s. Chomsky (1981) proposes that the control verb is a verb which allows an infinitive complement with a PRO subject. The structure with a control verb is called the control structure. Pollock (1989), Chomsky (1989) propose the Split INFL Hypothesis, which supposes that finite clauses contain more functional categories Agrs, T, and Agro rather than a single INFL head. They maintain that the Case checking should take place in the Spec-head configuration. The projection of these functional categories makes the syntactic structure more concrete. To make a further understanding of the control structure, we introduce the (29) below.

(29) I persuaded him to resign.

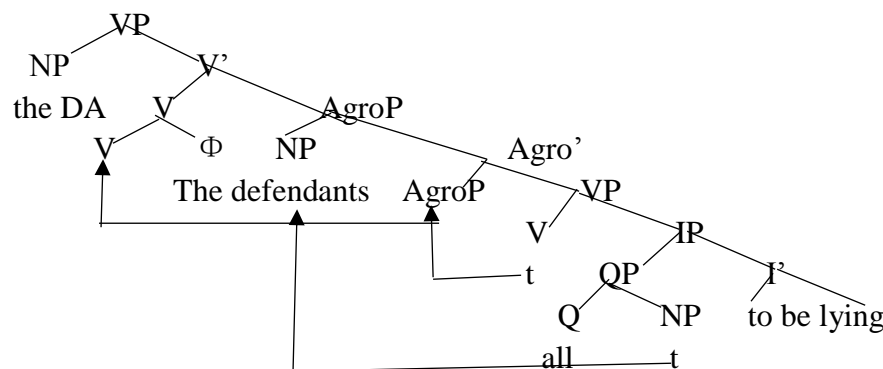


(29) is the control structure, and *persuaded* is the control verb. We can find the object *him* is base-generated in Spec-VP and assigned the internal thematic role by the main verb *persuaded*. Its accusative Case is checked on Spec-AgroP. PRO as the subject of infinitive clause *to resign* is controlled by its antecedent *him*.

4.2.2 The Analysis of Raising Structure

As we mentioned above, the Split INFL Hypothesis (Pollock, Chomsky, 1989) argues the existence of more functional categories. It maintains that the proposition on functional category AgroP well explains the position of floating quantifiers in the raising structure. Next, we will introduce the instance of Boskovic (1995), and its tree diagram is shown in (30).

(30) The DA proved the defendants all to be lying.



In (30), the quantifier *all* is used to modify the noun phrase *the defendants*, and it should be in the front of the noun phrase. Whereas the modified constituent *the defendants* moves to the Spec, AgroP and leaves the quantifier *all* floating. What causes this surface syntactic structure? We can find in (30) *the defendants* is base-generated in the Spec-IP, assigned the external θ -role by the verb and forms the structure *proved all the defendants to be lying*. Then the nominal *the defendants* raises to the Spec-AgroP to check its objective Case and leaves the trace *t*, so it causes the floating of *all*.

From a syntactic perspective, (30) is a raising structure. The noun phrase raises to the position of the Spec-AgroP in order to check its objective Case, which is the demand of the Case Theory. The trace left by movement of the noun phrase is the subject of infinitive complement *to be lying*. For the raising structure, we find in the deep structure the noun phrase is base-generated in the Spec-IP and is assigned the external θ -role by the verb of infinitive clause.

Above all, we mainly introduce the control structure and the raising structure in terms of syntactic features. In the control structure, the subject of the infinitive complement is an empty category PRO which is controlled by its antecedent. The object of the matrix verb is base-generated in the Spec-VP and is assigned the internal θ -role by the matrix verb. Whereas in the raising structure, the subject of the infinitive complement

is empty category NP-trace left by the raising of the noun phrase. The object of the matrix verb is base-generated in Spec-IP and is assigned the external θ -role by the verb of infinitive clause.

4.3 The Features of the Control Verbs and the Raising Verbs

In the previous section we have introduced syntactic features of the control structures and the raising structures. Then we continue to make a further introduction of their semantic features. We argue that in some aspect the control verbs are similar to the unergatives, and the raising verbs are similar to the unaccusatives. The explanation of those characteristics will be presented.

4.3.1 Control Verbs V.S. Unergative Verbs

In the following section, we will introduce the features of the control verb and compare it with the unergative verb. Let's first look at the control structure (31) from Radford (2000).

(31) She will try [to PRO help him].

The control verb *try* takes an infinitival complement with a PRO subject. The subject of the whole sentence *she* is the controller of PRO, (31) is a subject control structure. PRO is a pronominal anaphor which takes its reference from its controller. Thus, the controller of PRO must be a referential expression. If we replace the subject *she* with other external arguments, for instance as shown in (32), we can find the sentences exhibit increasing anomaly.

(32) a. ?The cat will try to help him.

b. *The clock will try to help him.

c. *There will try to help him.

Therefore, the control verbs impose restrictions on their choice of the subject. Firstly, the control predicate requires its subject to be an expression denoting a rational being so the sentence (32b) is ill formed. Secondly, the subject of the control predicate cannot be a dummy expletive subject *there*, so the sentence (32c) is ill-formed, which also suggests that the control predicate, θ -mark their subjects. Thus, their external arguments must be referential rather than the dummy expletive *there* and they are assigned the agentive θ -role.

For the unergative verbs, the two semantic features are also applied to them. The subjects of unergative verbs are agentive so they must be a rational being. Besides, the nonreferential dummy expletive *there* is also not compatible with the structures with unergative verbs, because unergative verbs assign θ -role to their subject. In short, we attribute the similarity of control verbs and unergative verbs lies to the fact that they all have agentive external arguments.

4.3.2 Raising Verbs V.S. Unaccusative Verbs

On the basis of the two semantic features we have referred to, we will continue to introduce the raising verbs and their similarity with unaccusative verbs. At first, let us take a look at the instance (33) from Radford (2000).

(33) There seemed to be someone living here.

In contrast with the control verb, the raising verb *seem* allows a dummy subject like expletive *there*, which is a nonreferential pronoun. Then we replace the subject of the raising verb as follows.

(34) The book seems to be very interesting.

From (33) we can learn that subjects of raising predicates can be a nonreferential expression like *there*. Hence, the raising predicates do not assign any θ -role to their subjects. What is more, their external arguments can be an irrational being like sentence (34). The two features are opposite to those of the control predicates. Meanwhile, we contrast the raising verb with the unaccusative verb, and illustrate the instance from Radford (2000).

(35) a. There came a cry of anguish from inside of the house.

b. A cry of anguish came from inside of the house.

We find that the unaccusative verbs also do not require that their subjects are referential expressions, and they can be the expletive subject *there*. Likewise, the subjects of the unaccusative verbs can be an expression without rational thought. Moreover, the unaccusative verbs cannot assign the θ -roles to its external argument. In conclusion, we argue that the similarity of raising verbs and unaccusative verbs is that they all do not assign θ -roles to their subjects and they are both have a theme internal argument.

Above all, we find that control verbs and raising verbs are opposite in the requirement of their subjects and marking of the θ -roles to their external arguments. The same distinctions also hold true to the unergatives and unaccusatives. Above all, we have presented the explanation of the similarity of control verbs and the unergatives, as well as raising verbs and unaccusative verbs. The relationship between them we have found

is the basement of our later study especially in chapter 5.

Chapter 5 The A+I constructions and Unaccusative Hypothesis

Introduction

Based on the introduction in chapter 4, we have grasped features of the control structure and the raising structure respectively. In this chapter, we choose the linguistic facts of Chinese the *v-de* construction that we introduced in chapter 3. In the semantic aspect, the control verb is similar to the unergative verb, and the raising verb is similar to the unaccusative verb. We argue that if the main verb in Chinese the *v-de* construction is an unergative verb, then the syntactic structure of this the A+I construction is control structure, and if the main verb in Chinese the *v-de* construction is an unaccusative verb, then the syntactic structure of this the A+I construction is the raising structure. In 5.1 we will make a brief review of CAUSE-PROCESS-RESULT model of the complex causative events Folli (2002) which have been proved to be a useful instrument in the analysis of a number of disparate language structures. From the perspective of complex causative events, we will analyze the thematic overlapping phenomena of our data in 5.2. The proposal of this thesis will be demonstrated in 5.3, the control structure contains the empty category PRO which is the subject of its infinitive complement, and PRO is controlled by its antecedent assigned internal θ -role by the matrix verb, which is an unergative. The raising structure includes empty category NP-trace that is the subject of its infinitive complement, and NP-trace is the trace left by the movement of the nominal and it is assigned external θ -role by the unaccusative verb. Meanwhile, the existence of the empty category PRO in the control structure and that of the NP-trace in the raising structure can solve the thematic overlapping problem in our data, which is another merit of our proposal.

5.1 Models of Complex Causatives

The complex causative events are one of the major topics in syntactic-thematic interface study nowadays. There are many kinds of thematic models to analyze an event, such as the aspectual model (Tenny, 1994), the temporal model (Freed, 1979), the spatial model (Voorst, 1988), the lexical decomposition model, and the cognitive model (Croft, 1991). The studies on the causative event structure in semantics promote the corresponding studies in syntax. The syntacticians begin to think how to present internal

components of the event structure in terms of syntactic configuration. In the early framework of generative semantics, McCawley (1968) first puts the lexical decomposition model in semantics to analysis and assumes that the predicates are composed by CAUSE, BECOME and NOT. Hale and Keyser (1993) divide syntax into l-syntax and s-syntax, and postulates that the analysis of the event structure is carried out in l-syntax. Later on, the syntacticians bring in some functional categories to analyze the event structure, which will serve as basis for our analysis of thematic overlapping phenomena. At first, Chomsky (1995) and Radford (1997) develop the VP shell theory by Larson (1988) with additional functional categories. They regard the light verb as the affixal functional category with strong features. Huang (1997) and Lin (2001) further develop the light verb theory and add more thematic function to the event.

We take the complex causative events as a starting point to introduce the syntactic models on events. In this way, the components of event structure find their positions in syntactic structure. Furthermore, the θ -roles of arguments are determined by virtue of their positions in syntactic structure. Finally, the event structure, argument structure, and syntactic structure are united together. Folli (2002) demonstrates the CAUSE-PROCESS-RESULT model as follows.

(36) [**vP** object-of-cause [**v'** Cause [**VP** object-of-process [**v'** Process [**RvP** object-of-result [**Rv'** Result **XP**]]]]]]].

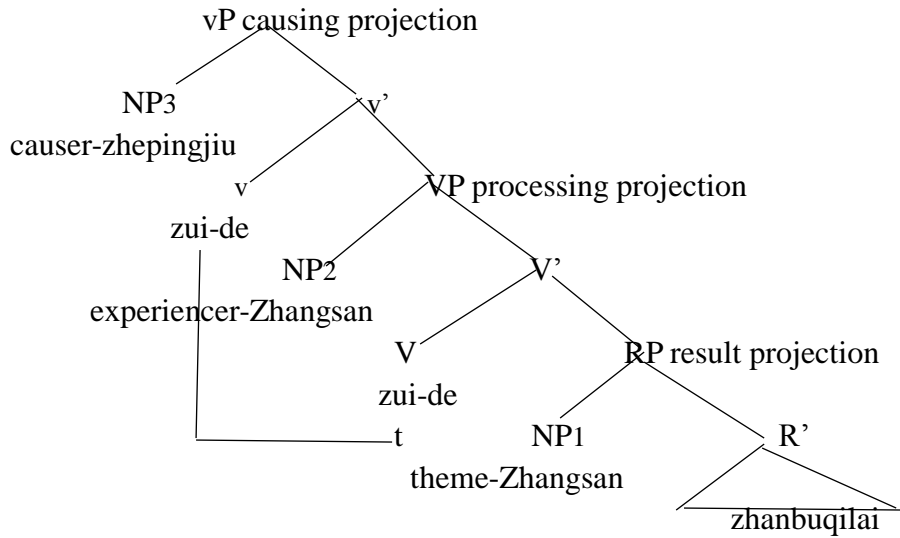
In the following section we will use the CAUSE-PROCESS-RESULT model to analyze our data.

5.2 Thematic Overlapping Phenomena

We have introduced the CAUSE-PROCESS-RESULT model above, and learned that components of the event structure can find their corresponding positions in the syntactic projection. We argue that there are thematic overlapping phenomena in the two types of Chinese the *v-de* construction as mentioned in chapter 3. In this section, we will take the sentence of each type as an example to demonstrate this phenomenon, and their tree diagrams are shown in (37) and (38).

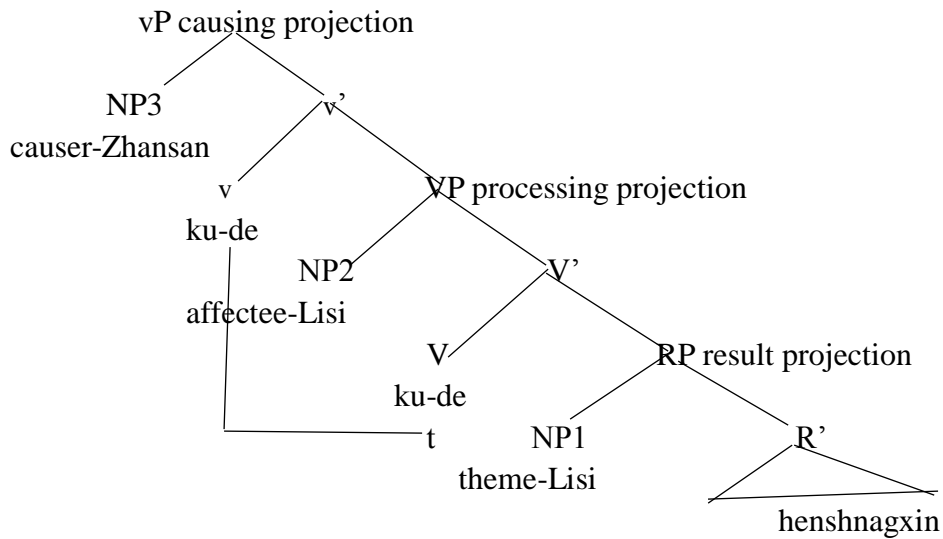
(37)

zheping	jiu	zui-de	Zhangsan	zhan	bu	qi lai
this	wine	drunk-ed	Zhangsan	stand	not	up
The wine	made	Zhangsan	so drunk	he	cannot	stand up



(38)

Zhangsan	ku-de	Lisi	hen	shang xin
Zhangsan	cried-de	Lisi	very	sad
The cry of	Zhangsan	made	Lisi very	sad



From the diagrams above, within RP in both (37) and (38) (the result projection) we find that θ -role of NP1 in each type are the same and NP1 are all assigned the theme θ -roles which is given to the entity undergoing action or state. In the VP called process projection, the θ -role of NP2 in each type disagree. In (37) the NP2 is assigned experiencer θ -roles. In (38) the θ -role of NP2 is affectee that is the entity affected by action or the entity suffering for the action. The experiencer θ -role of NP2 in (37) expresses the entity experiencing the change of state. For vP called causing projection, the θ -roles of NP3 in (37) and (38) are both causer. But the causer in (38) is distinguished from that of (37), because it has the agentive feature. Thus, we call it agentive causer. The CAUSER of (37) is a pure causer without any agentive feature. The thematic roles of arguments in each type have been demonstrated, which is

determined in terms of the positions when arguments in event structure are projected into the syntactic structure. We can find the θ -role of NP1 in each type is the same, which can also be said for NP3. However, the θ -role of NP2 comes to be different, which drives us to speculate the reason. Hence, the different θ -roles of the intermediate arguments, NP2 makes us think about the attributes of the matrix verbs. We maintain that it is determined by the “unergativeness” and “unaccusativeness” of the matrix verb essentially.

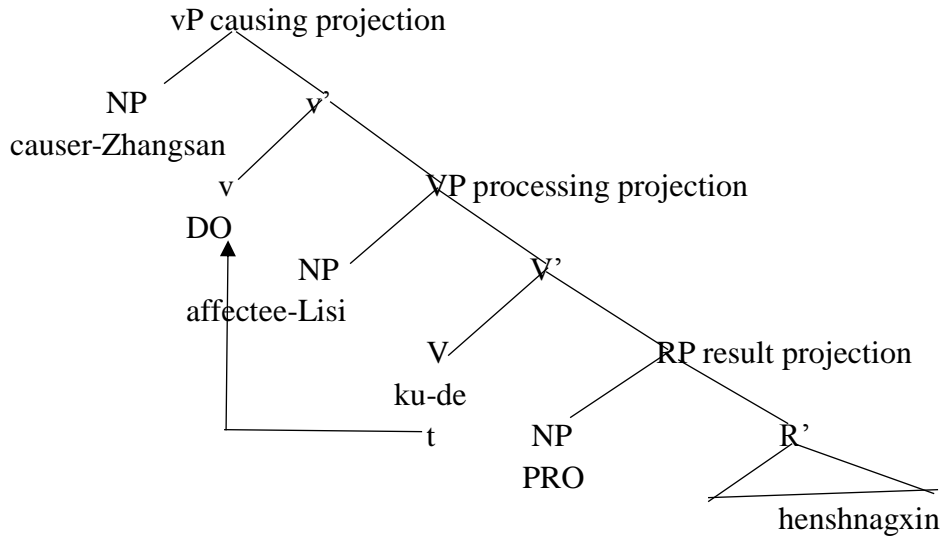
The most important thing is that we find thematic overlapping phenomena in the two types. As we pointed out when reviewing Huang’s study before, the constructions we study are all three-place predicates. The intermediate and internal arguments (NP2 and NP1) in each type are assigned different θ -roles respectively, but the two arguments are all towards the same nominal in the structures. That is to say, the same nominal assumes two θ -roles that are experiencer or affectee and theme simultaneously. This fact is regarded as violation of the θ -Criterion. We have found the thematic overlapping phenomena exist in the data of this study. Furthermore, we argue that there are some empty categories (PRO and NP-trace) in the syntax structure of our data which assumes the extra θ -roles to save this problem. And this problem will be proved in the following section.

5.3 The Unergative Verbs of The A+I construction in Control Structure

The empty category theory has been used to analyze Chinese facts by lots of scholars. Most of them have proved that there exists PRO in Chinese syntactic structures (Huang, 1984). Next, we will first analyze the first type of the Chinese A+I construction, and the instance will be shown as *Zhangsan ku-de Lisi hen shangxin*, “Zhangsan’s cry made Lisi very sad.” the matrix verbs in this type is unergatives and is three-place predicates. In this section we will show you when the main verb is an unergative verb in the A+I construction in Chinese that is a control structure, the PRO which can contribute to save the overlapping problem. The instance (42) and its tree diagram as below.

(42)

Zhangsan	ku-de	Lisi	hen	shang xin
Zhangsan	cried-de	Lisi	very	sad
The cry of	Zhangsan	made	Lisi very	sad



As the main verb of (42) *ku-de* is the unergative verb, the base-generated argument is the agent *Zhangsan* called external argument. The eventuality predicate, i.e., the light verb DO, attracts the head of the lower VP to move to the head position of the higher vP, and assign the causer θ -role to *zhangsan*. Meanwhile, the unergative verb *ku-de* assigns the affectee θ -role to *Lisi*. The Case-checking of *Lisi* takes place in the Spec-AgroP. We have mentioned before in the control structure. For the result projection IP, which is regarded as the internal argument of the matrix verb *ku-de*, its specifier is base-generated PRO and is assigned the theme θ -role within IP. The empty category PRO is controlled by *Lisi*. The main verb is an unergative verb, the syntactic structure of this A+I construction is the control structure.

We will use two diagnostics the pronominal binding and the Idiom Chunks to demonstrate that exhibits the projection of (42) is the control structure,

One attractive aspect of the control proposed here is pronominal binding that provides a very simple and direct explanation for the following facts of anaphora:

(43)

- | | | | | | |
|---|-----------------------|----------|--------------------|--------------|-----------|
| a | Zhangsan _i | ku-de | ta ^{*i/j} | hen | shang xin |
| | Zhangsan | cried-de | him | very | sad |
| | The cry of | Zhangsan | made | him very | sad |
| | | | | | |
| b | Zhangsan | ku-de | ziji | hen | shangxin |
| | Zhangsan | cried-de | himself | very | sad |
| | The cry of | Zhangsan | made | himself very | sad |

As shown, disjoint reference is required between *Zhangsan* and the pronoun *ta*, and binding of the anaphor *ziji* is allowed. We can find out that in the control structure the pronoun and the reflexive are each taken to be the object of the main verb. In both cases in (43) the root infinite clause is their governing category and the relevant facts follow directly from the Binding Theory.

(42) is a control structure, but not a raising structure, is particularly supported by an

important piece of evidence regarding the distribution of Idiom Chunks.

The idiomatic phrases consist of several words, but the meaning of the phrase is not predictable from the meaning of the individual words. The entire phrase functions as a single lexical unit. Idiom chunks are part of an idiomatic expression. Raising predicates may allow idiom chunks to appear, without losing the idiomatic meaning of the expression as a whole, whereas control predicates cannot. For example.

- (44) a. The cat appears to be out of the bag.
 #b. The cat refuses to be out of the bag. (Only literal interpretation)
 (to let the cat out of the bag= to reveal a secret)

A crucial point with idiomatic phrases is that fixed elements of an idiomatic phrase cannot bear any independent semantic role. If an idiom chunk appears as the subject of a raising predicates, the idiomatic meaning of the expression as a whole is not destroyed, and assign no semantic role to their subjects.

And in our data, it appears that the idiom chunk cannot bear independent thematic role in one construction and do not mean the expression as a whole with Chinese native speakers. As shown in (45) Huang (1992).

- (45)
- | | | | | |
|------------|----------|-----------|-------------|-----------|
| Zhangsan | ku-de | tie shu | kai hua | |
| Zhangsan | cried-de | iron tree | open flower | |
| The cry of | Zhangsan | made | iron tree | blossomed |

The expression of *tie shu kai hua* “iron tree blossomed” is taken to be an idiom meaning something unusual happened. Since this is an idiom, its parts are assumed to be non-referential, and cannot directly receive their θ -role. The expression of the *tie shu kai hua* in (45) is simply an exaggerative way of indicating the extent to which he cried. In such a situation the use of the expression is literal: he cried so much that, for some x , x an iron tree, x blossomed. It is unlike a normal idiom chunk.

Base on analysis of (44) and (45), the syntax structure of the A+I construction in (42) is control structure and the main verb is unergative predicate *ku-de*, the external argument is causer *Zhangsan*, its middle argument is affectee *Lisi* and the internal argument is the theme PRO. The existence of PRO solves the thematic overlapping problem, because PRO assumes the theme θ -role and its controller is assigned the affectee θ -role.

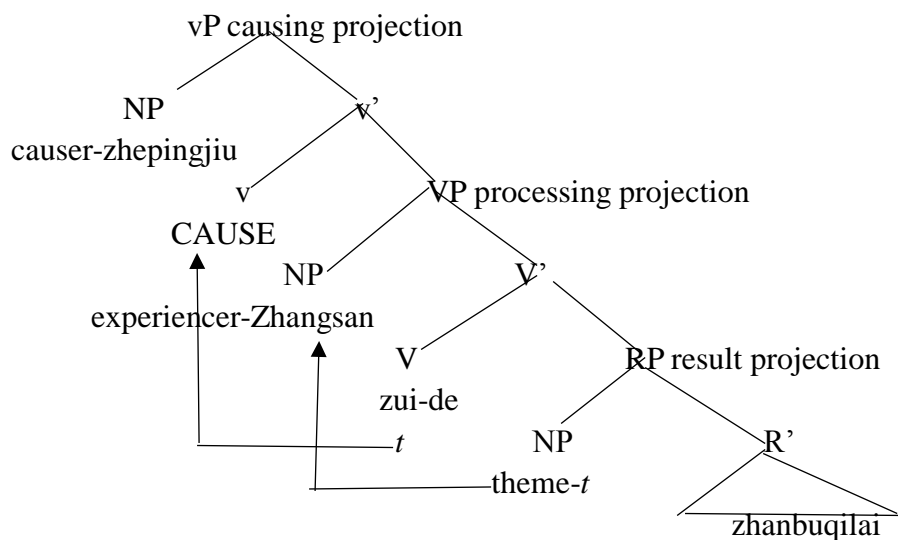
5.4 The Unaccusative Verbs of The A+I construction in Raising Structure

After the demonstration of the empty category PRO in our data, we will go on analyzing the distribution of empty category NP-trace, of which its existence has been

proved by many scholars (Hu and Wen 2007). In this section the existence of a NP-trace in the raising structure will be demonstrated. The example is: *zhepingjiu zui-de Zhangsan zhan bu qilai*, “the wine made Zhangsan cannot stand up.” In this structure, the matrix verb is unaccusative verb and is the three-place predicates. In this section we will show when the main verb is an unaccusative verb in the A+I construction in Chinese that is a raising structure, the NP-trace is in the structure which can contribute to saving the overlapping problem. The instance (46) and its tree diagram are shown below.

(46)

zheping	jiu	zui-de	Zhangsan	zhan	bu	qilai
this	wine	drunk-ed	Zhangsan	stand	not	up
The wine	made	Zhangsan	so drunk	that he	cannot	stand up



The main verb of (46) *zui-de* is the unaccusative verb. And its object *Zhangsan* in the deep structure is base-generated then moving up to the subject position in the surface structure, and is assigned the experiencer θ -role. The eventuality predicate that is the light verb CAUSE attracts the head of the lower VP to move to the head position of higher vP, and assign the causer θ -role to *zhepingjiu*. For the result projection IP *zhan bu qilai*, it is the internal argument of *zui-de* that refers to the state of *Zhangsan*. The trace *t* left by moving of *Zhangsan* and is assigned the theme θ -role within IP. In (46) the main verb is the unaccusative verb, and the syntax structure of this the A+I construction is a raising structure.

In order to demonstrate (46) is a raising structure, we will use two diagnostics, the construction Selectional Restriction and the Passivization.

The term Selectional Restrictions refers to thematic constraints imposed on the participants of linguistic constructions. The control structure imposes its selectional restrictions on their subjects. However, the raising structure do not impose any selectional restrictions on their subjects. For example:

(47)

- a that brick appears to be cracked
- b *that brick tried to be cracked

(48)

- a zheping jiu zui-de Zhangsan zhan bu qi lai
this wine drunk-ed Zhansan stand not up
wine made Zhangsan so drunk that he cannot stand
- b *Lisi zui-de Zhangsan zhan bu qi lai
Lisi drunk-ed Zhansan stand not up
Lisi made Zhangsan so drunk that he cannot stand

Since control predicates assign thematic θ -roles to their subjects, the control predicates involve the subject of agentive or volitional actions, so the inanimate subjects like the ones in (47b) is unacceptable and in (48b) the verb of *zui-de* is a raising verb cannot assign the θ -role to the subject so the animate subject of *Lisi* is unacceptable. On the other hand, the raising predicates do not assign thematic roles to their subjects and cannot impose selectional restrictions on them, so the (47a) and (48a) are acceptable.

Another diagnostic, the term Passivization refers to that the complement of control structure is passivized, the meaning of the sentence as a whole is altered. But with the raising structure, Passivization does not affect the prepositional meaning in any significant way. That is, both forms could be used to describe the same situation, and if one sentence is true the other must be true as well. As shown in follow.

(49)

- a all the girls try to like john
- b john tries to be liked by all the girls
(clear difference in meaning)

(50)

- a all the girls seem to like john
- b john seems to be liked by all the girls
(no difference in meaning)

(51)

- a zheping jiu zui-de Zhangsan zhan bu qi lai
this wine drunk-ed Zhansan stand not up
wine made Zhangsan drunk that he cannot stand
- b Zhangsan bei zhepingjiu zui-de zhan bu qi lai
Zhangsan PASS that wine drunk stand not up
The wine made Zhangsan drunk that he cannot stand
(no difference in meaning)

The Passivization of the complement verb in control structure changes the meaning of the sentence. In (49), the agent of *try* is identified with the experiencer of *like*, the *girls* make an effort to feel a particular emotion. But in (50), the agent of *try* is identified with the stimulus of *like*. In this case, it is *John* who must make an effort to be likeable. Whereas in raising construction, it cannot affect the meaning of the sentence in any significant way. Clearly (50) and (51) describe the same kind of situation.

Above all, the matrix verb of (46) is unaccusatives and the structure of it is the raising structure. We postulate that *Zhangsan* raises to the subject position because the unaccusatives cannot assign the accusative Case to its internal argument. Therefore, *Zhangsan* moves forwards to check its accusative Case in the higher position of the Spec-AgroP. The intermediate argument *Zhangsan* is assigned the experiencer θ -role and the internal argument is the NP-trace left by *Zhangsan*. We argue that NP-trace assumes the theme θ -role is assigned within IP. As we mentioned above, the nominal and its trace *t* bear their θ -roles respectively, so the thematic overlapping phenomena are solved.

5.5 Summary

In this thesis, under the framework of Generative Grammar, we analyzed the Chinese A+I construction in light of Unaccusative Hypothesis. The Chinese A + I construction can be divided into the control structures and the raising structures. We proposed that the essential distinction between the Chinese control structure and the raising structure rests on unaccusativity. In order to prove our hypothesis, we showed the data of the A + I construction in Chinese on the basis of Unaccusative Hypothesis.

Firstly, the data of the Chinese A+I constructions are classified into two types according to the unaccusativity of its main verbs and the types of the syntactic structures. By virtue of the two criteria, we divided this construction into two types. One criterion is the attributes of the main verb, and the other is the type of the syntactic structure. In the first type, the main verb is an unergative and it denotes an agent-centered event, and its syntactic structure is a control structure. For the second type, the main verb is an unaccusative and it denotes a theme-centered events, and its syntactic structure is a raising structure.

Secondly, according to the unaccusativity of the matrix verb we analyzed the internal syntactic structure of the two types of the A+I constructions and their generative mechanism. We find that the first type involves the control structure and the second type involves the raising structure. For the first type, the matrix verb is an unergative, which assigns accusative Case to its internal argument. And the empty category PRO is found in the structure of the first type and it can solve the overlapping of the θ -roles. Meanwhile, because the main verb is a three-place predicate in the data, the prior order of thematic roles are also demonstrated, which supports the proposal of Huang (2007). For the second type, the matrix verb is an unaccusative, whose internal argument raises up and leaves the trace *t*. The NP-trace is found in the structure of second type also solves the overlapping of the θ -roles.

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