Universitat Pompeu Fabra Barcelona

Treball de fi de màster de Recerca

On Resumptive Pronouns in Chinese Relative Clauses: An LFG Approach

Fengrong Yang

Màster: Lingüística Teòrica i Aplicada

Edició: 2015-2016

Directors: Dr. Àlex Alsina

Any de defensa: 2016

Col·lecció: Treballs de fi de màster

Programa oficial de postgrau
"Comunicació lingüística i mediació multilingüe"

Departament de Traducció i Ciències del Llenguatge

Universitat Pompeu Fabra

On Resumptive Pronouns in Chinese Relative Clauses: An LFG Approach

Thesis presented to the Department of Translation and Language Sciences
For the achievement of degree of MA
in Theoretical and Applied Linguistics

Author:
FENGRONG YANG

Supervisor:
Dr. ÀLEX ALSINA

July 2016

Acknowledgments

To Prof. Dr. Àlex Alsina, for accepting to be my supervisor, for dedicating so many hours talking and sharing his wonderful ideas with me, for all his patience and responsibility.

To Prof.s Drs. Enric Vallduví, Josep Fontana, Josep Quer, Laia Mayol and Paula Menendez-Benito, for helping me to get such big progress in just one year and leading me to the formal linguistic investigation. To Prof. Dr. Audrey Y.-H. Li in USC, for generously spending time to help a student she has never seen before.

To Zhang Xiaoyun, for always standing by my side, consoling me and giving me courage to go on. To Annakrizia Rico, for all her precious opinions on this thesis. To Tetyana Sukhlyak, a lovely girl that spends much time studying in the library with me.

To my parents, love you forever.

Abstract

This current study provides an LFG approach to the resumptive pronoun phenomenon in Chinese relative clauses. We first reclassify the relativization in Chinese according to grammatical functions and then give a detailed syntactic analysis to the puzzles that arise, mainly, the optionality of overt resumptive pronouns of some grammatical functions, the Highest Subject Restriction (HSR) and the ANM Feature Hypothesis in the relativization of objects.

Through our analysis we find that the optionality of overt RPs only occurs with core functions. A [PRED 'pro'] value will be given to the corresponding grammatical function when an overt RP does not appear. We thus extend the *Nonthematic Condition* on *Structure-Sharing* to *Anaphoric Binding* and give a good explanation for the HSR phenomenon. Lastly, the ANM Feature Hypothesis challenges McCloskey's generalization, namely, that resumptive pronouns are just ordinary pronouns.

Keywords: resumptive pronoun, argument, relative clauses, Chinese, HSR, LFG

Contents

Abbreviations

AH: Accessibility Hierarchy

COMP: Complement - LFG grammatical function

DE: Mandarin Chinese relative clause marker

DF: Discourse function - LFG grammatical function

DO: Direct object

ECC: Extended Coherence Condition

FUT: Tense of future

GF: Grammatical Function

HSR: Highest Subject Restriction

IO: Indirect object

LFG: Lexical-Functional Grammar

NP: Noun Phrase

NUM: Number

OBJ: Object - LFG grammatical function

OBJ_θ: Secondary object - LFG grammatical function

OBL_θ: Oblique - LFG grammatical function

PART: Particle

POSS: Possessive

RC: Relative Clause

RP: Resumptive Pronoun

SG: Singular

SUJ: Subject - Argument in AH

SUBJ: Subject - LFG grammatical function

UDF: Unbounded Dependency Function - LFG grammatical function

Chapter 1
Introduction

This work concerns the resumptive pronoun (RP) issues in Modern Mandarin Chinese relative clauses, which have been noticed long ago but not scientifically studied until recently. Generally speaking, the word *resumptive* has various names in Chinese, like *fushu* (Huang, Li & Li (2009), translated by Zhang 2013:214), *fuzhi* (Xu 2013, Chen & Wang 2008), or *jieying* (Ma 2007, Yang 2012) etc, meaning *retake, retention* or *correspondence* of the head noun inside the relative clause.

Previous studies on this topic are not many, yet problems are not few when we review the literature and try to give an account within the Lexical-Functional Grammar (LFG, see Bresnan 1982a) framework. The first is, Chinese resumptive pronoun is a rather complicated phenomenon but many times the description in previous works is too general and misses many crucial points (like the influence of the animate feature, for example). For this reason we do not intend to cover all types of relatives in this study but will specifically work on the relativization of argument of verbs and nouns and concentrate only on relatives with a head.

When we start dealing with syntactic issues, we encounter the second problem: given that Chinese relatives do not always require an overt resumptive pronoun, then when the overt pronoun does not appear, what the "empty" item indeed is? Does it behave like a gap in English or a null pronoun that is allowed in Chinese? If it is a null pronoun, where does its value in f-structure come from? How can overt/null resumptives get the coindexed with the head?

So in Chapter 2 we try to give a detailed description to the resumptive pronouns in Chinese relative clauses[1]. At the end of this chapter we will reach to give a table of conclusion in which three main features are observed: firstly, an overt RP is obligatory when OBL_{θ} and POSS are relativized, but this overt RP is not always required in the relativization of SUBJ, OBJ and OBJ_{θ} (the optionality of overt RPs); secondly, an overt pronoun is not acceptable if the relativized grammatical function is the SUBJ of the matrix clause inside a relative (the "Highest Subject Restriction", HSR); and lastly, the appearance of an overt RP in the relativization of objects (OBJ & OBJ_{θ}) is affected by an animate feature, departing from which we propose an ANM Feature Hypothesis. While the first two features concern syntactic issues, the third one is semantically decided and is argued to be a possible challenge to McCloskey's generalization that resumptive pronouns are just ordinary pronouns.

In Chapter 3 we intend to provide convincing explanations for the first two syntactic questions that arise at the end of Chapter 2. To begin with, we clarify the gap/null pronoun puzzle by making a literature review. We find that all previous studies are assuming a derivational syntactic theory and almost all of them are following the movement analysis applied to English to study Chinese relatives. Consequently, these studies all support the *gap* proposal in which certain shortcomings will be pointed out. The exception is Yang (2008), in which the author argues for a non-movement analysis. Departing from her work we propose that the generally assumed *gap* is in fact a null resumptive pronoun.

The rest part of Chapter 3 provides a convincing explanation for the Highest Subject Restriction puzzle within LFG framework based on the non-movement analysis in Yang (2008) and the *Nonthematic Condition on Structure-Sharing* in Alsina (2008). We also argue that for a resumptive pronoun to get the same reference with the head is a syntactic issue instead of a semantic-pragmatic one proposed byYang (2008). We will see that our proposal not only works to solve the HSR

[1] From now on, unless specially indicated, we use (Chinese) relative clauses to refer to relatives with a head, and concerning only the relativization of *arguments* of verbs and nouns.

problem in Chinese but can also explain the same puzzle in other languages with gaps in their relatives, like Irish.

In Chapter 4 we will draw a general conclusion of this work and in Appendix we will present the f-structures for all relativization mentioned in Chapter 2 (except for HSR that will have been shown in Chapter 3) as reference. These f-structures further demonstrate that our extension of the *Nonthematic Condition* on *Structure-Sharing* originally proposed in Alsina (2008) is reasonable.

Before entering the next Chapters, let us make a short review and some declarations about Chinese relative clauses, which will be of much importance for our coming study.

Main Features of Chinese relative clauses

The basic structure of Chinese relative clause with head can be presented as:

Relative Clause + DE + Determinar Phrase (serving as head)[2]

The two examples in (1) may illustrate the structures above:

(1) a. ni gei-guo ta yiben shu de nage ren
you give-PAST him a book DE the person
'the person that/whom you give a present to'

b. Ni jian-guo *de* nage nvhai
You see-PAST DE the girl
'the girl that/who you saw'

This structure indicates some main features in Chinese relatives:

a) The head of Chinese relative clauses is external, similar to most of the languages.

[2] There is in fact another structure for Chinese relative clause with a head, i.e., *Determiner + RC + DE + Noun*:

(1) a' nage ni gei-guo ta yiben shu de ren
the you give-PAST him a book DE person
'the person that/whom you give a present to'

We have to point out that the position of the determiner does not affect the appearance of a resumptive pronoun. In this work we will just ignore this structure and assume the one presented in the main body of the work.

b) The relative marker *de* is always presented, right following the relative clause. There is no so called *zero complementizer* or *zero relativizer* in Chinese relatives. English, on the other hand, uses this strategy quite a lot (e.g. *the book I gave to Mary*, *the house I bought*, or *the girl I like*, etc).

c) The relative clause is prenominal. That is, Chinese relative clause belongs to the head final type. Namely, the word *de* follows the relative clause and is followed by the head. This order applies to all Chinese relative clauses and no exceptions are found. What's more, as observed in Downing (1978), "Chinese is the *only* language in the present sample with VO word order but prenominal RC's" (Downing 1978: 395).

Identification of *de* in the relativization of arguments in Chinese

The *de* in the clause-final position is the only clausal modification marker (i.e., relative marker) we have in Chinese. Generally speaking, there are three types of relative markers (or relativizers): the complementizer (like *that* in English), the relative pronouns (like *who, whom,* or *which*, etc) and the relative adverbs (like *when, where* and *why*) (Peters 2013:83-84, 304-308). While the first two types (complementizer *that* and *wh-* relative pronouns) introduce relatives with their head noun being argument of verbs or nouns, the last one (relative adverbs) introduces relatives with non-argument heads (i.e., these relatives are adjuncts of verbs). Since in the current thesis we only concern the relativization of *arguments*, relative adverbs are out of our consideration.

In fact, Downing (1978) has already made the generalization that *initial or final relative markers in prenominal relative clauses are not pronouns* (Downing 1978:396). So in the relativization of arguments, the relativizer *de* can only be a complementizer.

An empirical linguistic fact can be a good support to Downing's generalization. The example comes from the relativization of argument of nouns (i.e, POSS, as we will see in detail in the next chapter) in Chinese:

(2) ta fuqin shi gongchengshi de nawei guniang
her father is engineer DE the girl
'the girl that her father is an engineer'
(the girl whose father is an engineer)

The *wh*-word *whose* in English is a relative pronoun and at the same time a POSS. But the POSS in (2) is the pronoun *ta* (her) that has nothing to do with the relativizer *de.* So here we claim that this *de* in Chinese argument relative clauses is just a *complementizer* and not a relative pronoun. We will see the relevance of this classification when discussing with syntax in f-structure in Chapter 3.

Chapter 2
Delimiting resumptive pronouns in Chinese relative clauses

2.1 Classification of argument functions

The first thing to consider is, which arguments can be relativized in a relative clause? Or, according to which classification should we start with? Generally speaking, previous studies base their investigation on the following six arguments: Subject (SUJ), Direct Object (DO), Indirect Object (IO), Oblique (OBL), Genitive (GEN), and Object of comparative (OCOMP)[3]. But here we need make some changes and reclassify them within an LFG framework.

In LFG, Grammatical Functions (GFs) include argument functions and non-argument ones and six GFs are generally assumed to be argument functions (Falk 2001): SUBJ, OBJ, OBJθ, OBLθ, POSS and COMP. Among these six functions, the relativization of the first five is clear and not controversial. The problem lies in COMP, the relativization of which, though not that common in Chinese, does exist and is both grammatical and acceptable. For example:

[3] These six arguments are in fact the components in the *Accessibility Hierarchy* proposed by Keenan and Comrie (1977): *SUJ* > *DO* > *IO* > *OBL* > *GEN* > *OCOMP*, stating that relative clauses (RCs) in with their antecedent in positions to the left are easier to process than those to the right. In other words, if a language can relativize positions lower in the accessibility hierarchy, it can always relativize positions higher up, but not vice versa.

Previous studies on the relativization of Chinese relatives are based on the elements in this hierarchy.

(3) Wo zuotian huiqu wanle de zhejianshi rang mama hen shengqi.
I yesterday come-back late DE this-thing make mom very angry
'I came back late yesterday, which makes mom very angry.'

It is quite clear from (3) that what is relativized is the whole clause. So it would be meaningless to talk about resumptive pronouns *inside* the clause. For this reason the relativization of COMP will not be taken into consideration in this thesis.

To be short, in this work argument functions to be studied are five: SUBJ, OBJ, OBJθ, OBLθ, and POSS. We further distinguish them according to whether they are argument of verbs or of nouns and reclassify the arguments from the six that previous articles use (i.e., SUJ, DO, IO, OBL, GEN, and OCOMP) to the five (i.e., SUBJ, OBJ, OBJθ, OBLθ, and POSS) to be studied in this article. Namely:

a) We assume four verbal argument functions: SUBJ, OBJ, OBJθ and OBLθ.

Among objects, typologists have made several classifications, distinguishing DO/ IO on the one hand, and primary and secondary objects on the other (Dryer 1986). Researchers in LFG have generally adopted the latter classification, using "OBJ" and "OBJθ" for primary and secondary objects, respectively (Bresnan, Asudeh, Toivonen & Wechsler 2016:96). To be more specific, the traditional term IO refers to a complement with certain types of thematic role (recipient or beneficiary) and thus carrying certain semantic flavor. But grammatical functions are purely syntactic terms. As we will see in 2.2.1.2, OBJ is defined as the "immediately post verbal nominal" (Falk 2001:95) and OBJθ designates secondary object. The traditionally called DO may either be OBJ or OBJθ while IO may be OBJ or OBLθ in LFG. Since GFs are purely syntactic, terms like DO/IO with a semantic consideration will not be used in the our analysis.

OBLθ refers to an object introduced by prepositions. In Chinese, OCOMP (the Object of comparative) is introduced by a comparative preposition, so we classify the OCOMP to the function of OBLθ.

b) POSS (possessive, GEN in AH) is considered to be the argument of nouns within LFG (see Falk (2001). We will study the relativization of POSS according to the grammatical functions (i.e., SUBJ, OBJ, OBJθ or OBLθ) of the noun that is

complemented by a POSS. Incidentally, POSS in Chinese is also introduced by the word *de.* In this case, *de* can be considered as the possessive marker, which equals *'s* in English:

(4) a. xiaoming de shu
xiaoming DE book
'xiaoming's book'

b. xiaoming (de) mama
xiaoming (DE) mother
'xiaoming's mother'[4]

2.2 Resumptive pronouns in relative clauses

2.2.1 Relativization of verbal arguments according to their function

In this section, we will give detailed and representative examples to the relativization of each grammatical function (SUBJ, OBJ, OBJθ, OBLθ, and POSS). We would like to indicate that examples are cited from published papers and books or given by the own writer with a native speaker's intuition. We try to give cited examples as many as possible to guarantee the correctness and the authority. Indirectly cited examples (those originally given in Chinese) are all phonologically transcribed first, illustrated by a following glossary and then translated into the corresponding English form. We slightly adjust the directly cited examples in order to get a unified presentation with those transcribed ones. Origins are indicated immediately after them.

[4] Here a difference can be observed: in (4a), *de* must obligatorily appear and in (4b), it is optional. Generally speaking, if the head noun has humanity feature, *de* is optional and if not, *de* is obligatory.

2.2.1.1 Relativization of SUBJ

Most of the previous papers have registered that when SUBJ is relativized, a corresponding RP can optionally appear in the relative clause:

(5) a. wo juede (ta) xihuan yingyu de nage ren
I think (he) like English DE the man
'the man that I think likes English'

b. wo juede (ta) mingtian hui kaimen de neige tushuguan
I think (it) tomorrow will open DE the library
'the library that I think will open tomorrow'

c. nimen dou shuo (ta) bu-hui lai canjia wanhui de nvhai[5]
you all say (she) not-will come participate party DE girl
'the girl that you all say that will not come to participate the party'

However, an interesting phenomenon is observed in the following examples, in which the appearance of an RP is prohibited:

(6) a. (*ta) xihuan yingyu de nage ren
(*he) like English DE the man
'the man that likes English' (Chen&Wang, 2008)

b. (*ta) gangcai he ni shuohua de ren
(*he) just-now with you talk DE man
'the man that talked with you just now' (Deng, 2008)

c. (*ta) mingtian hui kaimen de neige tushuguan
(*it) tomorrow will open DE the library
'the library that will open tomorrow' (Huang, Li & Li 2009)

[5] Here two things need to be clarified:
a) The determiner of the head can cause certain confusion to non-native speakers. Chinese DPs can have its D like *nage* in (5a), *neige* in (5b), or just nothing (in (5c)). Both *nage* and *neige* literally mean *that* in English (they can be considered as different phonetic realizations of a same demonstrator), adding definitive reading to the head noun.
b) The translation of *ta* can be masculine, feminine or neutral, for we cannot distinguish the gender just from the pronunciation in Chinese. But it is just an illustration and what the gender really is will not affect the appearance of a resumptive.

The difference between examples in (5) and (6) is the position of the relativized SUBJ. Mainly, SUBJs in (5) all appear in embedded clauses of a relative clause while SUBJs in (6) are the SUBJ of the matrix clause of the relative.

In fact, this phenomenon is also observed in many other languages. Asudeh (2012) names it the *Highest Subject Restriction* (HSR). According to Asudeh (2012), similar question has already been noted in McCloskey (1979, 1990), Sells (1984), Shlonsky (1992) and Willis (2000). McCloskey (1990: 209) points out that in Irish, "within each wh-construction, resumptive pronouns can appear in every clausal position but one". The one it cannot appear is the subject position immediately following the relative head (the "highest subject"):

(7) an fear a raibh (*sé) breoite
the man that be-PAST (*he) ill
'the man that was ill' (McCloskey, 1990)

Considering the constituent order in Chinese relatives, we need to refine the definition of the *highest subject.* It cannot be referred to as "the one immediately following the relative head", for a Chinese relative is prenominal and a *highest subject* can never follow the head. It is in fact the SUBJ of the matrix clause, others that are not the highest ones are SUBJs of an embedded clause[6].

[6] Here the *matrix clause* refers to the *matrix clause of the relative clause* and the *embedded clause* to the *embedded clause of the relative clause.* We use the shorter form for the sake of brevity.

We need to point out that a counterexample is found in Gu (2006):

(ta) neng jiang yikou-liuli yingyu de nage nanren
(he) can speak fluently English DE the man
'the man that speaks English fluently.' (Gu, 2006)

But we will not consider this exception to be a threat to our previous generalization, given that most studies (examples in (6), among others) agree that in Chinese this Highest Subject Restriction (HSR) does exist. Adding personal judgment with a native speaker's intuition, we will omit this example and keep this generalization of HSR in Chinese relatives.

2.2.1.2 Relativization of OBJ and OBJθ

OBJ (primary object) is the "immediately post verbal nominal" (Falk 2001:95) argument function. Apart from OBJ, ditransitive verbs also require a secondary object whose thematic role is limited to *theme*. We use OBJθ to refer to the secondary object. Regardless of the differences between OBJ and OBJθ, we still study them in the same part, for they are both objects of verbs.[7]

There are two ways of expressing 3-place verbal predicates in Chinese, illustrated by two examples shown in (8):

(8) a. Wo song-le yifen liwu gei xiaowang.
I give-PAST a present to xiaowang.
'I gave a present to xiaowang.'

b. Wo son-le xiaowang yifen liwu.
I give-PAST xiaowang a present.
'I gave xiaowang a present.'

For the convenience of our study, we will name the construction in (8a) *Oblique-goal construction* or simply *Oblique-goal*, and the one in (8b) *Ditransitive construction* or just *Ditransitive*:

(9) *Oblique-goal construction*: Verb + OBJ + OBLθ
Ditransitive construction: Verb + OBJ + OBJθ

In *Oblique-goal construction* like (8a), *liwu* (present) is OBJ and x*iaowang* introduced by the preposition *gei* is OBLθ. In *Ditransitive construction* like (8b), *xiaowang* is the OBJ, *liwu* (present) here is a secondary object apart from the OBJ, so it is the OBJθ (specifically, OBJ_{Theme}). We could find that the OBJ in *Oblique-goal construction* equals the OBJθ in *Ditransitive construction* in terms of thematic roles. This is true both in Chinese and in English.

[7] Both OBJ and OBJθ are GFs in f-structure mapped from [+*o*] arguments, and are the only two GFs which an [+*o*] argument can map to. For further mapping issues, see Lexical Mapping Theory (Dalrymple (2001) or Falk (2001)), which deals with the mapping between thematic structure and argument structure, as well as between argument structure and f-structure.

The relativization of OBJ of a monotransitive verb[8]

Examples in (10) are situations in which the verb is monotransitive:

(10) a. wo xihuan (ta) de nage nvhai
I like (her) DE the girl
'the girl that I like' (Hawkins & Chan 1997)

b. ni qin-le (ta) de nage nanhai
you kiss-PAST (him) DE the boy
'the boy that you kiss'

c. xiaowang sha-le (ta) de nazhi ji
xiaowang kill-PAST (it) DE the hen
'the hen that xiaowang killed'

But Huang, Li & Li (2009) said that "when the object of a verb (the accusative object) is relativized, the object position must be empty (Huang Li & Li 2009:218)." The example they use is:

(11) a. lisi (suo) mai (*ta) de shu.
lisi SUO[9] buy (*it) DE book
'the books that lisi bought' (Huang, Li & Li 2009)

This seems to be in contrast with the former examples in (10). But note that here the relativized objects is not a person. In other words, it does not have an animate (anm) feature. Similar examples could be:

b. mama zuo-hao (*ta) de fan
mom prepare-PAST (*it) DE food
'the food that mom prepared' or

[8] We use the term "monotransitive verb" to refer to 2-place verbal predicates and to differentiate it from the two forms of 3-place predicates in (9).

[9] In this example the author is talking about a particle "SUO" in relative clauses. Here we just use the example for our illustration and do not care the issues about this particle "SUO".

c. ni xie (*ta) de lunwen
you write (*it) DE lunwen
'the thesis that you write'

From the contrast between (10) and (11), we guess that whether an OBJ of a monotransitive verb in Chinese relative clauses have an overt RP or not may be decided by an lexical feature. When the relativized OBJ has [+anm] feature, an overt RP inside the relative clause is possible, if instead it has [-anm] feature, an overt RPs is prohibited. So here we preliminarily propose the following hypothesis for the relativization of OBJ (of a monotransitive verb):

ANM Feature Hypothesis:

Relativization of OBJ of a monotransitive by means of an overt RP is only possible if it has the [+anm] feature.[10]

The relativization of OBJ of 3-place verbs

Let us continue to see if this hypothesis could also apply to objects of the 3-place verbs:

OBJ in *Oblique-goal construction*

Xu (2013) points out that an overt RP of DO cannot appear in the relative clause when the relativized nominal is the DO of a ditransitive verb[11]. Illustrating examples are:

(12) a. wo tuijian (*ta) gei xiaowang de nabu dianying
I recommend (*it) to xiaowang DE the film
'the film that I recommend to xiaowang'

[10] With this Hypothesis people may wonder if it can also be applied to other GFs. We will see soon that the hypothesis will only apply to OBJ and OBJθ and not to other GFs: *tushugan* (library) in (5b) (relativization of SUBJ), *dao* (knife) in (15b) (relativization of OBLθ) and *fangzi* (house) in (21b) (relativization of POSS) can all have an overt RP, yet they all have [-anm] feature.

[11] Here we are just literally translating Xu (2013)'s statement without using terms like DO/IO in the rest part of our thesis.

b. xiaowang di (*ta) gei wo de naben shu
xiaowang hand (*it) to me DE the book
'the book that xiaowang hands to me'

c. wo jieshao-guo (ta) gei xiaowang de nage pengyou
I introduce-PAST (him) to xiaowang DE the friend
'the friend that I introduced to xiaowang'

The ungrammaticality of RP in (12a) and (12b) and the grammaticality in (12c) have partially extended the scope of application of our ANM Feature Hypothesis in that, an overt RP is also impossible when the OBJ in *Oblique-goal construction* has [-anm] feature.

OBJ in *Ditransitive construction*

We move on to see examples of OBJ functions in *Ditransitive construction*:

(13) a. wo song-le (ta) yifen liwu de nage nvhai
I give-PAST (her) a present DE the girl
'the girl that I gave a present'[12]

b. wo mai-le (ta) yizhi hua de nage nvhai
I sell-PAST (her) a flower DE the girl
'the girl that I sold a flower'

c. wo jiao (ta) xibanyayu de nage nvhai
I teach (her) Spanish DE the girl
'the girl that I teach Spanish'

The relativized GF in each sentence is the OBJ and is apparently an OBJ with [+anm] feature. We need to point out that people prefer using an overt RP to omitting it in this case, but to omit it here is totally acceptable.

Logically we should move on to discuss OBJs with [-anm] feature. But do OBJs with [-anm] feature really exist in *Ditransitive construction* in Chinese? In fact not. OBJs in *Ditarnsitive* should be sentient for the thematic roles they bear (e.g.,

[12] The relative comes from *wo song-le nage nvhai yibenshu* (I gave the girl a present).

beneficiary or goal). For example, we can say "*Wo jiao ta xibanyayu* (I teach her Spanish)", we can even say "*Wo jiao gou/yingwu xibanyayu* (*I teach the dog/the parrot Spanish)*", but something like "*wo jiao *zhuozi xibanyayu* (I teach *the table Spanish)" is not acceptable. Similarly, English sentences like *I showed my friend the picture* or even *I showed my cat the picture* are possible, but *I showed *my desk the picture* not.

So our ANM hypothesis is still consistent with OBJ in *Ditransitive construction* ([+anm] OBJ in *Ditransitive* can have an overt RP and while OBJ with [-anm] in *Ditransitive* is not possible). Together with our former discussion (OBJ in monotransitive and OBJ in *Oblique-goal*), we can say that our ANM hypothesis is applicable to all the OBJs: that when an OBJ has [+anm] feature, an overt RP is optional; if instead it has [-anm] feature, an overt pronoun will never appear. We put the revised hypothesis below:

Revised ANM Feature Hypothesis:

Relativization of OBJ by means of an overt RP is only possible if it has the [+anm] feature.

The relativization of OBJθ

According to structures in (9), OBJθ only appears in *Ditransitive construction*. We repeat (8b) here:

(8) b. Wo son-le xiaowang yifen liwu.
I give-PAST xiaowang a present.
'I gave xiaowang a present.'

The corresponding relativization is:

(8) b'. wo song-le xiaowang (*ta) de nafen liwu
I give-PAST xiaowang (*it) DE the present
'the present that I gave xiaowang'

(8b)' shows that OBJθ with [-anm] feature cannot have a RP in the relative clause. But what about OBJθ with [+anm] feature? Here we argue that no verbs with a [+anm]

feature argument mapping to OBJθ would constitute a felicitous sentence in Chinese. If we produce sentences like:

(14) a. # Wo jieshao xiaowang yige pengyou.
I introduce xiaowang a friend
'I introduce xiaowang a friend.'

The sentence is rather rare and infelicitous. The corresponding relative clause is even worse and ungrammatical:

b.* wo jieshao xiaowang de nage penyou
I introduce xiaowang DE the friend
'the friend I introduce xiaowang'

Native speakers will choose to add a preposition *gei* (to) between *jieshao* (introduce) and *xiaowang*, letting the expression be:

(14) b' Wo jiehshao gei xiaowang yige pengyou.
I introduce to xiaowang a friend
'I introduce a friend to xiaowang.'

With the added preposition *gei*, the structure in (14b)' converts to *Oblique-goal construction*. Since OBJθ only exist in *Ditransitive construction*, we argue that OBJθ with [+anm] feature is not possible in Chinese. Incidentally, in English a *Ditransitive construction* like "*I introduce Amy Mary*" is not grammatical either, and "*I introduce Mary to Amy"* is the generally used expression.

Now that OBJθ with [+anm] feature is not possible and OBJθ with [-anm] feature does not permit an overt RP in relatives, we can say that the former ANM hypothesis is also applicable to the relativization of OBJθ.

A small conclusion: in Chinese, argument functions mapped from [+o] arguments have four representations: OBJ of monotransitive verbs with [±anm] feature, OBJ in *Oblique-goal construction* with [±anm] feature, OBJ in *Ditransitive construction* with [+anm] feature and OBJθ in *Ditransitive* with [-anm] feature. The *ANM Feature Hypothesis* applies to all of them. So finally we could finish our discussion about the relativization of objects (OBJ & OBJθ) by making a final revision to the hypothesis:

ANM Feature Hypothesis (final version)

Relativization of objects (OBJ or *OBJθ) by means of an overt RP is only possible if it has the [+anm] feature.*

Since the appearance of some resumptives in Chinese is affected by some certain lexical feature, this hypothesis could be a challenge to McCloskey (2002)'s generalization that resumptive pronouns are just ordinary pronouns and are not morphologically or otherwise distinct from non-resumptive ones:

A remarkable but little commented on property of resumptive pronouns is that they simply are *pronouns. I know of no report of a language that uses a morphologically or lexically distinct series of pronouns in the resumptive function… The formal features which define resumptive pronouns will then just be the formal features which define pronouns in general.*

McCloskey (2002:192)

In light of McCloskey's Generalization, Asudeh (2011) classified theories of resumption into two kinds:

Ordinary Pronoun Theory of Resumption:

There is no lexical/morphological/featural/syntactic difference between resumptive pronouns and referential or bound pronouns.

Special Pronoun Theory of Resumption:

There is some lexical/morphological/featural/syntactic difference between resumptive pronouns and referential or bound pronouns.

The ANM Hypothesis questions *the Ordinary Pronoun Theory of Resumption* and supports *the Special Theory* because ordinary pronouns do not have this restriction: Chinese does not prohibit overt ordinary pronouns to refer to non animate items (like *kanjian ta* (to see it), *miaohui ta* (to describe it) or *quiekai ta* (to cut it) etc). In this sense lexical difference does exist between resumptive pronouns (OBJ & OBJθ) and ordinary pronouns of an object. Yet more studies are needed to finally decide which of

the two theories (ordinary or special) really holds. We will leave this topic for further investigation.

2.2.1.3 Relativization of OBL$_\theta$

The OBL$_\theta$ is mapped from an argument introduced by a preposition. The relativization of OBL$_\theta$ requires an obligatory RP in relative clauses. In this aspect no opposite opinions are presented and maybe it is a cross-linguistic fact:

(15) a. ni gen *(ta) da-guo-jia de nage haizi
you with *(him) fight-PAST DE the child
'the child that you fought with' (Shen & Dong 2004)

b. Ni yong *(ta) qie xigua de naba dao
I with *(it) cut watermelon DE the knife
'the knife that you cut watermelon with'

As we have mentioned, Chinese comparatives are introduced by a comparative preposition such as "bi", "he" or "tong":

(16) a. xiaowang bi *(ta) gao de nage nvhai
xiaowang than *(her) tall DE the girl
'the girl that xiaowang is taller than'

b. ni bi *(ta) xuexi hao de nage nanhai
you than *(him) study well DE the boy
'the boy that you study better than'

The OBL$_\theta$ in *Oblique-goal Construction* is not discussed in the last part and it is just a common OBL$_\theta$ case:

(17) a. wo song liwu gei *(ta) de neige nvhai
I give present to *(her) DE the girl
'the girl that I give a present to' (Hawkins & Chan 1997)

2.2.2 Argument of nouns - Relativization of POSS[13]

We divide our discussion of the relativization of POSS into three parts respectively: POSS as argument of SUBJ, as argument of OBJ&OBJθ and as argument of OBLθ.

POSS as argument of SUBJ

(18) a. Ni renshi *(ta) fuqin shi gongchengshi de nawei guniang ma?
You know *(her) father is engineer DE the girl wh-PART?
'Do you know the girl that her father is an engineer?'
(Do you know the girl whose father is an engineer?)

(Deng, 2008)

With our previous discussion, it is not difficult to find that the relativized POSS is an argument of the embedded SUBJ, a position that may influence the appearance of a resumptive pronoun. In fact, more examples do confirm our guess:

b. wo juede *(ta) baba yiding hui-lai de nage nanhai
I think *(his) father surely FUT PART-come DE the boy
'the boy that I think his father will surely come'
(the boy whose father I think will surely come)

c. wo juede *(ta) meimei kaoshi hui-tongguo de nage nanhai
I think *(his) sister exam FUT PART-pass DE the boy
'the boy that I think his sister will pass the exam'
(the boy whose sister I think will pass the exam)

So departing from Deng (2008)'s claim, we come to the conclusion that when the relativized POSS is the argument of an embedded SUBJ, a resumptive pronoun is obligatory.

[13] Remember we have talked in 2.1 that if the head noun in a possessive structure has humanity feature, the possessive marker DE is optional. In the following examples of this part we choose to omit this "DE", for it is more natural in Chinese daily expression. So glossaries of "ta" in this section may also refer to "our", "his" or "her", etc. (Just as a reminder, because the glossary of previous sentences are "he" "she" or "it", etc.)

What about the *Highest SUBJ* position? Previous discussion also tells us that the *Highest SUBJ* has a special status. Let us see some examples:

(19) a. *(ta) nvpengyou hen xihuan wo de nage ren
*(his) girlfriend very like me DE the person
'the person that his girl friend likes me very much'
(the person whose girlfriend likes me very much)

b. *(ta) fuqin shi gongchengshi de nawei guniang
*(her) father is engineer DE the girl
'the girl that her father is an engineer'
(the girl whose father is an engineer)

c. *(ta) meimei kaoshi hui-tongguo de nage nanhai
*(his) sister exam FUT PART-pass DE the boy
'the boy that I think his sister will pass the exam'
(the boy whose sister I think will pass the exam)

Therefore we argue that the position of the SUBJ in the relative clause does not affect the appearance of the overt RP of its argument POSS: all POSSs as arguments of SUBJ must have an overt RP in the relative clause.

POSS as argument of OBJ & OBJθ

We have spent much time talking about the resumption of OBJ and OBJθ and fortunately have reached to give a simple and quite pleasing hypothesis. Here we will still firstly describe the linguistic facts according to the four different cases (i.e., OBJ [±anm] in monotransitive, OBJ [±anm] in *Oblique-goal construction*, OBJ [+anm] in *Ditransitive construction*, and OBJθ [-anm] in *Ditransitive construction*) to see if we can also come to a rather simple conclusion.

(20) Monotransitive OBJ

a. wo xihuan *(ta) nvpengyou de nage ren
I like *(his) girlfriend DE the person
'the person that I like *(his) girlfriend'
(the person whose girlfriend I like)

b. wo xihuan *(tade)[14] cheku de nage fangzi[15]

I like *(its) garage DE the house

'the house that I like its garage'

(the house the garage of which I like)

(21) OBJ in *Oblique-goal construction*

a. wo jieshao-guo *(ta) didi gei ni de nage nvhai

I introduce-PAST *(her) brother to you DE the girl

'the girl that I introduced her brother to you'

(the girl whose brother I introduced to you)

b. wo song-le *(tade) cheku gei xiaowang de nage fangzi

I give-PAST *(its) garage to xiaowang DE the house

'the house that I gave its garage to xiaowang'

(the house the garage of which I gave to xiaowang)

(22) OBJ in *Ditransitive construction*

a. wo jiao *(ta) didi xibanyayu de nage nvhai

I teach *(her) brother Spanish DE the girl

'the girl that I teach her brother Spanish'

(the girl whose brother I teach Spanish)

b. wo song-le *(ta) laoshi yiben shu de nage nanhai

I give-PAST *(his) teacher a book DE the boy

'the boy that I gave his teacher a book'

(the boy whose teacher I gave a book)[16]

---

[14] Note that here the head noun of the possessive is not humanity and a possessive marker DE is obligatory.

[15] Actually sentences like (20b), (21b) or (23a) are less common, for it is less usual for objects with [-anm] feature to be a "possessor", not to mention to relativize it. But actually such examples are acceptable.

[16] We have argued that there are no OBJs with [-anm] feature in *Ditransitive construction* in Chinese, so in the given examples the OBJs are all with [+anm] feature.

(23) OBJθ in *Ditransitive construction*

a. wo song-le xiaowang *(tade) cheku de nage fangzi
I give-PAST xiaowang *(its) garage DE the house
'the house that I gave xiaowang its garage'
(the house the garage of which I gave xiaowang)[17]

With examples from (20) to (23), we conclude that all POSSs as argument of OBJ or OBJθ obligatorily require an RP inside the relative clause.

POSS as argument of OBLθ

The most common examples for an OBLθ with its argument POSS being relativized are:

(24) a. ni gen *(ta) meimei da-guo-jia de nage haizi
you with *(his) sister fight-PAST DE the child
'the child that you fought with his sister'
(the child whose sister you fought with)

b. Wo he *(ta) xuesheng jiaotan-guo de nage laoshi
I with *(him) student talk-PAST DE the professor
'the professor that I talked with his student'
(the professor whose student I talked with)

The OBLθ in *Olique-goal construction* is just a common OBLθ case:

(25) a. wo song liwu gei *(ta) didi de neige nvhai
I give present to *(her) brother DE the girl
'the girl that I give a present to her brother'
(the girl whose brother I give a present to)

[17] We have argued that a sentence with a [+anm] OBJθ would be rather infelicitous and rare. Adding that to relativize a POSS as argument of an OBJθ with [-anm] feature is also unusual, here we only give one example.

b. wo jieshao yiwei laoshi gei *(ta) didi de nage nvhai
I introduce a teacher to *(her) brother DE the girl
'the girl that I introduce a teacher to her brother'
(the girl whose brother I introduce a teacher to)

Comparatives are of no exception either:

(26) a. xiaowang bi *(ta) didi gao de nage nvhai
xiaowang than *(her) brother tall DE the girl
'the girl that xiaowang is taller than her brother'
(the girl whose brother xiaowang is taller than)

b. ni bi *(ta) didi xuexi hao de nage nvhai
you than *(her) brother study well DE the girl
'the girl that you study better than her brother'
(the girl whose brother you study better than)

Examples presented above show that an overt RP of a relativized POSS as argument of OBL_{θ} is obligatory.

Having seen the examples of POSS as argument of SUBJ, as argument of OBJ & OBJ_{θ} and as argument of OBL_{θ}, we come to a rather simple conclusion: an overt RP in the relativization of argument of nouns (i.e., POSS) is always obligatory.

2.3 Conclusion

We conclude our discussion about resumptive pronouns in Chinese relatives in this chapter with the table presented below:

	SUBJ		OBJ & OBJθ		OBLθ
	highest	embedded	[-anm]	[+anm]	
Arguments of verbs	*	Op	*	Op	√
POSS	√	√	√		√

Note: a) √ refers to an overt resumptive pronoun;

b) * means an overt RP is not possible.

c) Op means an overt RP is optional.

This table is a conclusive description of the rather perplexing resumptive phenomenon in the relativization of argument functions in Chinese relative clauses. Mainly three questions are observed from it:

a) An overt RP is obligatory in the relativization of OBLθ and POSS, but not in the relativization of SUBJ, OBJ and OBJθ (let us call it "the optionality of RP").

b) An overt RP is not possible when the relativized GF is the SUBJ of the matrix clause of the relative clause (the Highest Subject Restriction, HSR).

c) The appearance of an overt RP of OBJ & OBJθ is affected by the ANM feature of the object.

Therefore the task in the next Chapter is to give a convincing explanation for these questions that arise. We will concentrate on a) and b) because they concern syntactic issues while the appearance of overt RPs of objects is semantically decided. A LFG approach is assumed to account for the puzzles in a) and b).

Chapter 3
Syntax of resumptive pronouns in Chinese relative clauses

3.1 Previous studies

In this chapter we try to solve the two problems formed at the end of the last chapter, mainly: a) why overt RPs are always obligatory in the relativization of some GFs while in the relativization of others not and b) why Chinese relatives have the Highest Subject Restriction (HSR). We aim to explore an LFG approach to solve these puzzles to which even within the same derivational syntactic analysis scholars have not worked out a unified solution.

Three representative opinions within the structural syntax framework will be discussed: Xu (2013), Huang, Li & Li (2009) and Yang (2008). The first two are both following a movement analysis in English relativization, but they also differ from each other in defending a partial or total movement respectively. Yang (2008) on the other hand, argues for a *non-movement* analysis for the relativization in Chinese and proposes that while there is a *wh*-trace in English RCs, its Chinese counterpart is just an empty pronoun.

We have to point out that, literature on this topic within the derivational theory, though not that much, is clearly not limited to the three works to be presented below. What's more, although we intend show some potencial deficiencies of these previous works, we will never mean to totally deny the value of them, for some ideas give us much inspiration for the coming proposal within the LFG framework, as will be seen

soon in 3.2. Our proposal is expected to be an alternative exploration to account for these resumptive issues that have worried the linguists for quite a long time.

3.1.1 Total or partial movement

Total movement

Xu (2013) proposed that head nouns that relative clauses modify are all produced via movement (we call it "total movement" for the convenience of discussion), leaving a trace inside the relatives. The trace can either be an overt gap or a *phonologically realized* one (i.e., an overt RP). In other words, an overt RP inside the relative clause is a gap with pronunciation. We consider this way of analysis to have certain vulnerability that can be immediately disproved with some linguistic facts in Chinese relative clauses.

As we know, within the derivational theory there are a number of constrains on the movement which are called *Island Constrains*, stating that to extract elements from syntactic islands (such as the *wh*-island, the complex Noun Phrase (NP) island, or the adjunct island, etc) will never be possible and consequently, gaps are sensitive to such island constraints. But actually Chinese RPs can appear in islands. For example:

(27) Wo xiang kan ni yinwei **ta** bu-lai hui shengqi de nage ren.
I want see you because **he** not-come will get-angry DE the person.
'I want to see the person that you will get angry because he does not come.'

(Huang, Li&Li 2009)

The movement is presented as follows:

Wo xiang kan [[ni [yinwei ta_i bu-lai] hui shengqi de] nage ren_i].

If RPs are in fact gaps, they should also be sensitive to islands. But the grammaticality of (27) shows that the pronoun *ta* inside the adjunct island (*yinwei ta*

bu-lai (because he does not come)) is acceptable. Therefore RPs and gaps are essentially different and the account of *total movement* does not seem to be plausible.

Partial movement

Another proposal put forward by Aoun & Li (2003) and further discussed in Huang, Li & Li (2009) tells that relatives can be derived either by movement or by base-generation (we call it *partial movement*), distinguished by the appearance of a gap or an overt RP. To be specific, the relativization is considered to be derived by movement when the relativized position inside RC is a gap, which is sensitive to island constraints. On the contrary, the relativization is derived by base-generation when there is an overt RP inside the RC, making island constrains no longer relevant.

Contradictions would certainly appear if we apply this *partial movement* analysis to Chinese relatives in which an overt RP is optional, like the relativization of an embedded SUBJ or the relativization of an OBJ/OBJ$_0$ with [+anm] feature. We restate (5a) here:

(5) a. wo juede (ta) xihuan yingyu de neige ren
I think (he) like English DE the man
'the man that I think likes English' (embedded SUBJ)

We will have a contradictory explanation with this *partial movement* proposal that if *ta* appears, the sentence is derived by base-generation and if not, the sentence is produced by movement. This seems to be absurd because on the one hand, intuitionally, a sentence cannot have two kinds of generation; and on the other hand, as we have said, in this gap position an overt RP cannot appear, otherwise this RP would be considered as a gap with pronunciation, which has already been disapproved when we discuss the *total movement* proposal. But (5a) clearly shows that in some Chinese relatives a gap can be freely replaced by an overt RP.

Up till now, either treating gaps and RPs uniformly as gaps (i.e., considering overt RPs as phonologically realized gaps) or treating them separately has been pointed out certain shortcomings. But one possibility still remains: given that Chinese allows

some of its pronouns to be unexpressed, what if "gaps" are not really gaps but null pronouns?

3.1.2 Non-movement: account of Yang (2008)

As we have said in the last section, most analysis about Chinese relativization follows the movement theory applied to the study of relativization in English. But as we have demonstrated, while this movement proposal in English is viable, it encounters many problems in analyzing Chinese linguistic facts. Pointing out a cluster of differences between English and Chinese relatives with some movement tests like the reconstruction effects, the island effects, or the parasitic gaps, Yang (2008) in her paper argues for using a non-movement analysis in Chinese relatives instead of indistinguishably applying a movement theory in English to Chinese. She finally concluded that while there is a *wh*-trace in English relatives, its Chinese counterpart is just an empty pronoun. For example:

(28) (*tamen) du-guo (*ta) de ren bu duo de naben shu
(*they) read-PAST (*it) DE people no many DE the book
'the book that not many people read it' (Yang 2008)

Yang argues that if the sentence is really derived by movement, the underlined part in (28) should be considered as an *island* (concretely, a complex NP island) from which the head moves. If so, the appearance of a "gap" between *du-guo* (read-PAST) and *de* (DE) would be illegal, for it should be sensitive to islands. But (28) clearly shows that this is not the case.

In fact, more violations of island constrains have already been observed in previous studies, like Li (1999):

(29) (ta) chuan de yifu hen piaoliang de nage ren:
a. ta chuan de yifu hen piaoliang de nage ren
he wear DE clothes very beautiful DE the person (with an overt RP)

b. chuan de yifu hen piaoliang de nage ren

wear DE clothes very beautiful DE the person (without an overt RP)

'the person that the clothes that he wears are very beautiful'

In this example either (29a) with an overt pronoun or (29b) with a "gap" are acceptable, yet they are both situated in a complex NP island (highlighted with an underline). The sensitivity of gaps to the islands prevent us from considering the case of disappearance of *ta* (he) in (29b) as a gap caused by movement of the relativized head, but it will be of no problem if we consider this position to be occupied by an unexpressed pronoun.

We have a further argument to support Yang (2008)'s proposal (that there is no movement in Chinese relatives and that those appearing to be gaps are really unexpressed pronouns): Chinese is known to allow some of its pronouns to be phonologically unexpressed, as long as the context provides enough information to avoid possible misunderstanding. Relatives clauses have no reason to behave differently from the common clauses in allowing null pronouns, given that the head of the relative serves to provide the information for an unequivocal understanding of what the unexpressed pronoun refers to. Let us reconsider the example in (29):

(29) (ta) chuan de yifu hen piaoliang de nage ren:

a. **ta** chuan de yifu hen piaoliang de nage ren

he wear DE clothes very beautiful DE the person (with an overt RP)

b. chuan de yifu hen piaoliang de nage ren

wear DE clothes very beautiful DE that person (without an overt RP)

'the person that the clothes that he wears are very beautiful' (Li 1999)

(29)' a. — Ni zhidao nage ren ma?

You know that person wh-PART

'Do you know that person?'

— Zhidao, **ta** chuande yifu hen piaoliang.

Know, **he** wear clothes very beautiful.

'Yes I do, the clothes he wears are very beautiful' (with an overt pronoun)

b. — Ni zhidao nage ren ma?

You know that person wh-PART

'Do you know that person?'

— Zhidao, chuande yifu hen piaoliang.

Know, wear clothes very beautiful.

'Yes I do, the clothes he wears are very beautiful' (without an overt pronoun)

The two answers (with or without an overt pronoun) in (29)' are both grammatical. Most importantly, we cannot use a movement theory to explain why in (29b)' the pronoun does not appear, for it is just a declarative sentence. Given that Chinese allows its pronoun to be phonologically unrealized, the assumption that there is always a resumptive pronoun (overt or null) in Chinese relative clauses is quite convincing. What's more, this way of reasoning can provide a unified explanation for both (29) and (29)'.

In summary, Yang (2008) is a good inspiration for our coming syntactic analysis within the LFG framework. From now on we can assume that resumptive pronouns always exist in Chinese relative clauses, and that what seems to be gaps are in fact null RPs. But this non-movement proposal forms a challenge for itself: how could this RP inside the relative clause get the same reference with the head noun? We know that a strong argument favoring the movement theory is that through movement the gap and the head noun naturally get coindexed, but if we do not assume a movement analysis, we have to look for other explanations for this coreference question. Yang (2008) just says that this is a semantic-pragmatic issue without further developing her ideas. We do not agree with her and consider it to be much related to syntax. In the coming LFG analysis we will see how the f-structure works to solve this problem.

3.2 An LFG-based proposal

The following is the detailed LFG solution to the problems put forward at the end of Chapter 2. The optionality of RP states that both OBL_{θ} and POSS obligatorily require an overt RP when relativized, while SUBJ, OBJ and OBJ_{θ} do not. The Highest Subject Restriction (HSR) tells that the relativized SUBJ of a matrix clause of the relative cannot have an overt RP and if instead it is the SUBJ of an embedded clause, an overt RP is optional.

We will firstly introduce the research of Alsina (2008) about the S*tructure-Sharing* relationship in f-structure and some related theoretical notions in the LFG theory. Then departing from Yang (2008)'s non-movement proposal for Chinese relative clauses, we try to propose a viable licensing mechanism for the [PRED 'pro'] value of Chinese null pronouns. Next, an LFG solution to the HSR problem is proposed, based on the development of the two previous sections. Finally we try to apply our solution to other languages in which this HSR phenomenon is also observed.

We would like to indicate—for a record—that though only the relativization of the highest SUBJ is studied in this section, corresponding f-structures for the relativization of each GFs mentioned in Chapter 2 will be presented in the Appendix for a possible reference. We use a solid curve line to represent the *Structure-Sharing* relationship and a dotted one for *Anaphoric Binding*. All the f-structures are only about the CP part (i.e., relative clause + complementizer *de*). For brevity, irrelevant features will not appear.

3.2.1 The study of Alsina (2008)

To account for the requirement of the *Extended Coherence Condition* (ECC) that a UDF[18] must be linked to a within-clause thematic role bearing GF, either through *Structure-Sharing* or *Anaphoric Binding*, formulated by Zaenen (1980) and assumed by many researchers within LFG, like Bresnan (2001), Dalrymple (2001) or Falk (2001), Alsina (2008) proposed a *Nonthematic Condition on Structure-Sharing*, formulated as follows:

(30) **Nonthematic Condition on Structure-Sharing**: In every f-structure containing structure-sharing, one of the structure-shared GFs is nonthematic and more f-prominent than any GF identified with it.

Two notions in this proposal have to be made clear here:

a) A nonthematic GF is assumed to be UDF, which, together with the SUBJ, composes the Discourse Function (DF)[19] that occupies the highest position in the GF Hierarchy (i.e., DF > OBJ > OBL).

b) The f-prominence is defined as: GF α is more f-prominent than GF β iff α f-commands[20] β and either β does not f-command α or α is higher than β in the GF Hierarchy.

A direct consequence of this *Nonthematic Condition* is what Alsina (2008) called the "same-clause UDF-SUBJ ban" on *Structure-Sharing*: it is impossible for the UDF

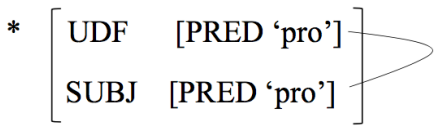
---

[18] It is generally assumed in LFG that there are two information-structural GFs: TOPIC, which expresses the topic of the discourse (and thus old information) and FOCUS, which expresses new information. We follow Alsina (2008) in considering that the distinction between these two GFs has to do with information packaging and thus more appropriate to make this distinction at information-structure level rather than at the level of f-structure. So in what follows we just use a single grammatical function UDF (Unbounded Dependency Function) to unify TOPIC and FOCUS. The unified name "OP(ERATOR)" is used in Alsina (2008), but later in Alsina (manuscript) the term UDF is proposed and is also adopted by Asudeh (2012). Thus we choose to use UDF in this paper.

[19] See Bresnan (2001), or Falk (2001).

[20] The notion of *f-command* comes from Bresnan (1982b), which is similar to *c-command* but concerns the relation on f-structure: "For any occurrences of the functions α, β, in an f-structure F, α f-commands β iff t α does not contain β and every f-structure of F that contains α contains β." (Bresnan 1982b).

to get a *Structure-Shared* relationship with the SUBJ in a same clause, for in the same f-structure UDF and SUBJ f-command each other and their status in the GF Hierarchy are equal (both are DFs). In other words, there is not such f-prominence between the two. An illustration for "UDF-SUBJ ban" is presented below:



3.2.2 F-structures for overt/null pronouns

[PRED 'pro'] value given by the verb

The first thing to consider is, why is an overt RP in the relativization of some GFs optional while in others obligatory?

From the table at the end of Chapter 2 we find that grammatical functions that allow their overt RPs to be optional are SUBJ, OBJ, and OBJθ, while those that obligatorily require overt RPs are OBLθ and POSS. This division exactly corresponds to the division between core functions and noncore functions[21] that are generally assumed in LFG: that core functions contain the SUBJ, the OBJ and the OBJθ. We do not reckon this just as a coincidence, for Mohanan (1982) also observed that Malayalam allows its grammatical functions SUBJ, OBJ, and OBJθ to be unexpressed but not the other functions like OBLθ or ADJ, etc. Incidentally, Brazilian Portuguese has null subject and objects, too. While it is true that not many languages allow both null subject and objects, languages only allowing a null subject are quite common, like Spanish, Italian or Arabic (Richards, J. C., Platt, J. & Platt, H. 1992).

These cross-linguistic facts inspire us to assume that only core functions can be unexpressed, and in this way we can explain the question of optionality: SUBJ, OBJ and OBJθ belong to core functions thus their RPs are allowed to be null; OBLθ and POSS on the other hand are noncore functions and an overt RP is always required.

[21] Other denominations are also adopted: like term/nonterm functions in Falk (2001) or direct/ indirect functions in Alsina (1996).

Though a null RP and a gap are similar in that neither of them has a syntactic position in the c-structure according to the *Economy of Expression*[22], they are also different, for a gap doesn't have its value in the f-structure while a null pronoun does. An immediately coming question is, where does this value come from? While it is natural that an overt pronoun can itself provide the value, it does not seem to be logical for a null pronoun to do so.

To solve this problem, we assume that verbs in languages that allow null pronouns have a potential [PRED 'pro'] value that is given to the null pronoun. Chinese verbs can give this [PRED 'pro'] value to three GFs (i.e., the three core functions, SUBJ, OBJ, and OBJθ):

Verb: ((↑SUBJ PRED)='pro')
((↑OBJ PRED)='pro')
((↑OBJθ PRED)='pro')

For example:

(31) —Ta xihuan ni ma?
He like you wh-PART?
'Does he like you?'
— a) Ta xihuan wo./ b) Ta xihuan./ c) Xihuan wo. / d) Xihuan.
a) He like me./ b) He like. / c) Like me. / d) Like.
'Yes, he does.'

All these four answers are acceptable, but their f-structures are slightly different. We present the f-structures of a) and d) for an illustration:

[22] See Falk (2001), Bresnan (2001) Dalrymple (2014), or Bresnan (2016) (among others):

All syntactic phrase structure nodes are optional and are not used unless required by independent principles (completeness, coherence, semantic expressivity).

(Bresnan 2016:206)

$$\begin{bmatrix} \text{SUBJ} & \begin{bmatrix} \text{PRED} & \text{'pro'} \\ \text{PERS} & 3 \\ \text{NUM} & \text{SG} \end{bmatrix}_1 \\ \text{PRED} & \text{'xihuan <Arg}_1\text{, Arg}_2\text{>'} \\ \text{OBJ} & \begin{bmatrix} \text{PRED} & \text{'pro'} \\ \text{PERS} & 1 \\ \text{NUM} & \text{SG} \end{bmatrix}_2 \end{bmatrix}$$

a)

$$\begin{bmatrix} \text{SUBJ} & [\text{PRED 'pro'}]_1 \\ \text{PRED} & \text{'xihuan <Arg}_1\text{, Arg}_2\text{>'} \\ \text{OBJ} & [\text{PRED 'pro'}]_2 \end{bmatrix}$$

d)

From these two structures we can see the different resources of values of the SUBJ and OBJ: in a) the value of SUBJ comes from the overt pronoun *ta* (he) and the value of OBJ comes from *wo* (me) while in d) both the two values of SUBJ and OBJ are [PRED 'pro'] given by the verb *xihuan* (like), for both the SUBJ and OBJ are unexpressed.

The Anaphoric Binding in f-structure

Now that there is always an RP in Chinese relatives (be it overt or null) and the value of the corresponding GF always exists in the f-structure, a UDF in any f-structures describing Chinese relatives can only be linked to the relativized GF through *Anaphoric Binding* to satisfy the *Extended Coherence Condition*. The way of linking between the UDF and another GF in English relatives on the other hand is through *Structure-Sharing*, for in English gaps do exist.

Therefore we also need a constrain to regulate this *Anaphoric Binding* relationship, just as the *Nonthematic Condition on Structure-Sharing* does to regulate the *Structure-Sharing* one. So here we extend this condition and assume the *Unbounded Dependencies* to include both *Structure Sharing* and *Anaphoric Binding*:

(32) **Extended Nonthemantic Condition**: In every f-structure containing an Unbounded Dependency relationship, one of the GFs in the relation is nonthematic and more f-prominent than the other GF identified with it.

Accordingly, there would also be a "same-clause UDF-SUBJ ban" for Anaphoric Binding—that a UDF can never have an *Anaphoric Binding* relationship with a SUBJ in the same f-structure:

* [UDF [PRED 'pro'] ⋯]
[SUBJ [PRED 'pro'] ⋯]

3.2.3 Solution to the puzzle of HSR

Discussions in 3.2.1 and 3.2.2 facilitate our explanation of the Highest Subject Restriction puzzle in this section. We will rule out the f-structures that are not well-formed step by step to finally reach a well-formed one, which exactly describes the relative that does not violate the Highest Subject Restriction. Example of (6a) is repeated here:

(6) a. *ta xihuan yingyu de nage ren
*he like English DE the man
'the man that likes English'

The corresponding f-structure is presented below. According to the *Extended Coherence Condition*, the UDF must be linked to the SUBJ, either through *Structure-Sharing* or through *Anaphoric Binding*. From the previous discussion in 3.2.2 we have already known that Chinese does not have gaps in its relatives and the UDF can only be linked to SUBJ through *Anaphoric Binding*:

* [UDF [PRED 'pro'] ⋯]
[CLAUSE-TYPE REL]
[SUBJ [PRED 'pro']$_1$ ⋯]
[PRED 'xihuan <Arg$_1$, Arg$_2$>']
[OBJ [PRED 'yingyu']$_2$]

This f-structure is not well formed, for it violates at the same time two conditions: the *Extended Nonthematic Condition* and the *Uniqueness Condition* (to appear). It violates the *Extended Nonthematic Condition*, for a UDF can never have an *Anaphoric Binding* relationship with a SUBJ in the same f-structure. It also violates the *Uniqueness Condition*, one of the wellformedness conditions for f-structures in LFG[23]:

(33) **Uniqueness Condition**: Every attribute has a unique value.

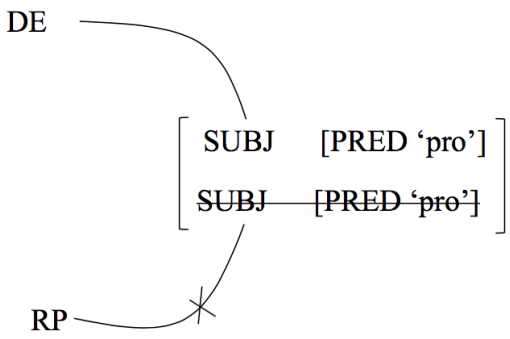
The concept of uniqueness is based on the idea that an f-structure attribute can only have a unique value, or alternatively that its value must be consistent (whence another name as *Consistency Condition*). That is to say, for example, that a clause cannot have two different DFs (as in this case), or two different SUBJs (to appear). For both UDF and SUBJ are Discourse Functions, their simultaneous appearance would surely violate this *Uniqueness Condition*. This means only one of them could appear in the same f-structure. If only one DF (either UDF or SUBJ) remains in the f-structure, the violation of the *Extended Nonthematic Condition* will disappear accordingly, because a single function cannot form an *Anaphoric Binding* relationship by itself.

We can either eliminate the UDF or the SUBJ, and we choose to eliminate former one, for if instead we eliminate the SUBJ, the left UDF is required to be linked to a SUBJ and it will find nothing to link to, thus violating the *Extended Coherence Condition* (ECC). Remember that the complementizer *de* optionally licenses a DF (either a UDF or a SUBJ) and since according to our analysis a UDF here is not possible, the complementizer *de* can only choose to license the SUBJ and give the [PRED ‘pro’] value to it.

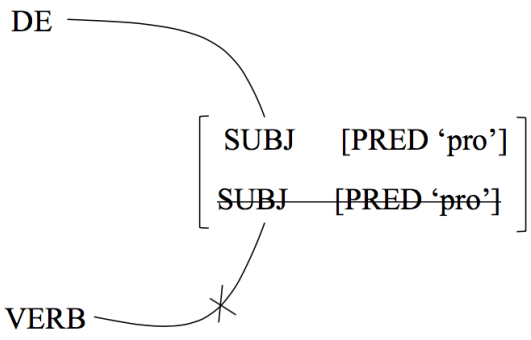
Since the *Uniqueness Condition* establishes that every attribute has a unique value and the value of SUBJ has already come from the complementizer *de*, no more values

[23] Four wellformedness conditions are assumed within the LFG framework. We have already seen the *Extended Coherence Condition* and the *Uniqueness Condition* is to be presented in (33). The remaining two are the *Completeness Condition* (that all functions that receive a thematic role must have a PRED feature) and the *Coherence Condition*, which stipulates (that any argument function that has its own PRED feature must be assigned a thematic role) (Falk 2001:63).

can be given to this SUBJ. That is, it is not possible for a resumptive pronoun to give another [PRED 'pro'] value to the SUBJ. In other words, an overt RP can never appear in the highest subject position, or otherwise it would be another resource of the value [PRED 'pro'] for the SUBJ and consequently, the *Uniqueness Condition* will be violated:



Now we have demonstrated that an overt RP is not possible and thus unable to give value to the highest SUBJ. But in 3.2.2 we have also said that the value can come from the verb once a GF is unexpressed. So we would expect the verb *xihuan* (like) to give a [PRED 'pro'] value to the highest SUBJ. However, this will not be possible, either: the value [PRED 'pro'] coming from the verb will also be held back, again by the *Uniqueness Condition*:

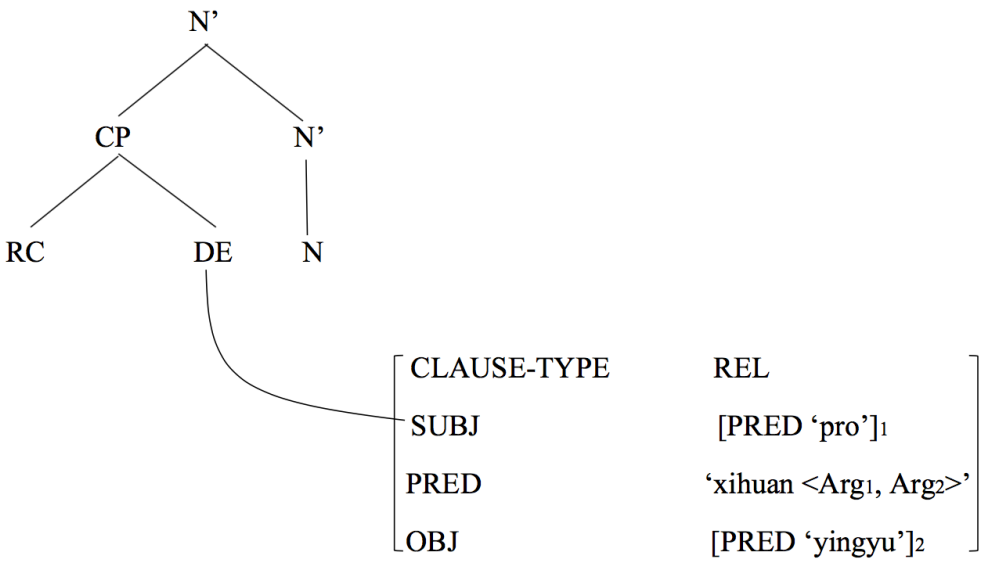


We present the correct (6a) and its corresponding f-structure below to conclude this section:

(6) a'. xihuan yingyu de nage ren

like English DE the man

'the man that likes English'



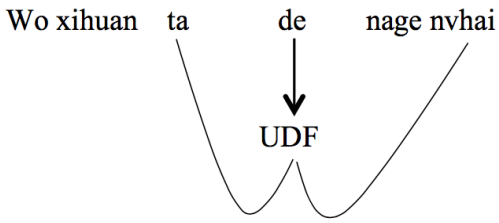
The complementizer *de* licenses a SUBJ (serving as DF) and gives the [PRED 'pro'] value to it. According to the *Uniqueness Condition*, no other values could be given to this SUBJ, thus an overt RP is not allowed here and the verb *xihuan* (like) is also prohibited to give the [PRED 'pro'] value it the SUBJ. In a word, the value of SUBJ only comes from its licenser, the complementizer *de*. In this way the f-structure of (6a)' does not violate any conditions and principles that we have presented in the earlier sections of this chapter.

Now only one question needs to be explained. That is, how could an RP inside the relative clause get coindexed with the head? With the basis of the former discussion, the question is quite easy to answer. Here we use (10a) for an illustration (we only present the overt RP form, though a null RP is also acceptable):

(10) a. wo xihuan ta de neige nvhai

I like her DE the girl

'the girl that I like'



The complementizer *de* marks a modification relationship between the relative and the head. *De* at the same time licenses a UDF, which is required to link to a thematic role bearing GF inside the relative clause (in overt/null RP form), and this linked GF is exactly the relativized one: that is to say, the UDF licensed by the complementizer *de* serves as a bridge between the resumptive and the head, and in this way the resumptive and the head naturally get coindexed.

3.2.4 HSR in Irish

The counterpart of a Chinese null resumptive pronoun in Irish is a gap. As we have mentioned at the beginning of Chapter 2, in Irish this HSR phenomenon is also observed. We repeat the example in (7) below:

(7) an fear a raibh (*sé) breoite
the man that be-PAST (*he) ill
'the man that was ill' (McCloskey, 1990)

It is even easier to explain the HSR problem in Irish than in Chinese: the Irish complementizer *a* optionally licenses a UDF or a SUBJ. To avoid violating the *Uniqueness Condition* and the *Extended Nonthematic Condition*, only a SUBJ licensed by the complementizer *a* is possible. This SUBJ gets its [PRED 'pro'] value from its licenser *a* and cannot get more values from other resources: an overt RP would surely be illegal and only a gap there is possible, for gaps cannot provide any values.

From here we can see the solution to these two kinds of relatives, let us call them "overt-null RP" relative and "overt RP-gap" relative. Chinese belongs to the former type and Irish belongs to the later. With our proposal, either type of languages can find a proper explanation to its HSR problem, if any should exist.

Chapter 4
Conclusion

This current study provides an LFG approach to Chinese resumptive pronoun phenomenon in relative clauses by first reclassifying the relativization in Chinese according to grammatical functions and then give a detailed syntactic analysis to the puzzles that arise, mainly, the HSR and the optionality of overt RPs.

The relativization in Chinese is studied according to the argument functions (SUBJ, OBJ, OBJ_{θ}, OBL_{θ}, and POSS) instead of the generally assumed elements in the *Accessibility Hierarchy* put forward by Keenan & Comrie (1977). By giving examples to each type, we finally reach to give a brief concluding schemata from which three major puzzles are observed: the optionality of an overt RP in the relativization of some GFs, the HSR problem and the influence of ANM feature on the appearance of an overt RP in the relativization of objects (OBJ & OBJ_{θ}).

Departing from Yang (2008)'s work we find that unlike English and many other languages, there are no gaps in Chinese relatives. The generally assumed *gap* is in fact a null resumptive pronoun. This is based on the fact that Chinese allows its core GFs to be unexpressed and that relatives clauses have no reason to behave differently from ordinary clauses in allowing null pronouns, since the head of the relative serves to provide clear information for an unequivocal understanding of what the unexpressed pronoun refers to. We argue that both overt and null pronouns have their value in the f-structure and that the value of a null pronoun is [PRED 'pro'], coming from the verb. We thus extend the *Nonthematic Condition* on *Structure-Sharing* to *Anaphoric Binding* to give a constrain for the f-structures of Chinese relative clauses.

The immediate consequence of this *Extended Nonthematic Condition* (i.e., the UDF-SUBJ ban on *Anaphoric Binding*), together with the *Uniqueness Condition*, gives a convincing explanation for the HSR problem, not only in Chinese (relative clauses of "overt-null RP" type) but also in many other languages ("overt RP-gap" type) like Irish.

Another small contribution is our proposal of *ANM Feature Hypothesis* for the relativization of objects, which has not been observed in the previous studies. What's more, we observe that this ANM feature restriction is not applicable to the overt pronouns of objects in ordinary clauses, which forms a challenge to McCloskey's generalization that resumptive pronouns are just ordinary pronouns.

More detailed investigation will surely be presented on this topic. We modestly hope that this work would be a good starting point to apply LFG approaches to Chinese linguistic studies. We have already seen the explanatory power of LFG in this study and we have every reason to believe that further investigation based on it will certainly succeed to solve more linguistic puzzles in Chinese and help to develop deeper insight into the nature of human languages.

Bibliography

Alsina, A. (1996). *The Role of Argument Structure in Grammar: Evidence from Romance*. Stanford: CSLI Publications.

Alsina, A., Mohanan, K., & Mohanan, T. (2005). How to get rid of the COMP. Proceedings of the LFG05 Conference. Stanford: CSLI Publications.

Alsina, A. (2008). A theory of structure-sharing: focusing on long-distance dependencies and parasitic gaps. Stanford: CSLI Publications.

Alsina, A. Simplifying the syntactic representation of unbounded dependencies in LFG. Manuscript, Pompeu Fabra University.

Aoun, J., & Li, Y.-H. Audrey. (2003). *Essays on the Representational and Derivational Nature of Grammar: the Diversity of Wh-constructions.* Cambridge, Mass: MIT Press.

Asudeh, A. (2011). Towards a unified theory of resumption. In Rouveret 2011, 121–187.

Asudeh, A. (2012). *The Logic of Pronominal Resumption.* Oxford University Press.

Bresnan, J. (1982a). *The Mental Representation of Grammatical Relations.* MIT Press.

Bresnan, J. (1982b). Control and complementation. *Linguistic Inquiry.* Vol. 13, No.3, 343-434. MIT Press. Reprinted in Bresnan (1982a), pp. 282–390.

Bresnan, J. (2001). *Lexical-Functional Syntax*. Oxford: Blackwell Publishers.

Bresnan, J., Asudeh, A., Toivonen, I., & Wechsler, S. (2016). *Lexical-Functional Syntax.* 2nd Edition. WILEY Blackwell.

Carnie, A. (2010). *Syntax: A Generative Introduction.* 2nd Edition. Blackwell Publishing.

Chen, Z., & Wang, H. (2008). On distribution of resumptive pronouns in Chinese relative constructions. *Foreign Language Education.* July, 2008. Vol. 29. No. 4.

Chierchia, G., & McConnell-Ginet, S. (1990). *Meaning and Grammar: An Introduction to Semantics.* Cambridge: MIT Press.

Dalrymple, M. (2001). *Lexical Functional Grammar.* San Diego: Academic Press.

Dalrymple, M., Kaplan, R. M., & King, T. H. (2014). Economy of expression. Manuscript, University of Oxford, Nuance, and eBay.

Deng, Y. (2008). Chinese and English relative clauses: a cognitive study. *Foreign Language and Their Teaching.* 2008, No. 6.

Downing, B. T. (1978). Some universals of relative clause structure. In *Universals of Human Language*, Joseph H. G. (ed.), 4: 357-418. Stanford CA: Stanford University Press.

Dryer, M. (1986). Primary objects, secondary objects and antidative. *Language* 62, 808–845.

Falk, Y. N. (2001). *Lexical-Functional Grammar*: *An Introduction to Parallel Constraint-Based Syntax*. Stanford: CSLI Publications.

Gu, G. (2006). Syntactic classification of resumptive pronouns. *Foreign Language and Their Teaching.* 2006, No. 5.

Hawkins, R. & Chan, C. Y. -H. (1997). The partial availability of universal grammar in second language acquisition: the “failed functional features hypothesis”. *Second Language Research.* 1997, 13: 187-226.

Huang, C.-T. James. (1984). On the distribution and reference of empty pronouns. *Linguistic Inquiry* 15. 531-574.

Huang, C.-T. James., Li, Y.-H., Audrey. & Li, Y. (2009). *The syntax of Chinese.* Cambridge University Press, Cambridge.

Keenan, E. L., & Comrie. B. (1977). NP accessibility and universal grammar. *Linguistic Inquiry* 8: 63-100.

Lehmann, C. (1986). On the typology of relative clauses. *Linguistics* 24: 663-681.

Li, Y.-H. Audrey. (1999). Word order, structure and relativization. In *On the Formal Ways to Chinese Linguistics. Tang, S.-T., & Liu, C.-S.* (eds.). Stanford: CSLI Publications.

Liu, W. (2007). Dynamic syntax: a case study of the resumptive pronouns in Chinese topicalization structures. *Contemporary Linguistics.* 2007. 3.

Ma, Z. (2007). Distributional differences, interlanguage acquisition and linguistic nature of resumptive pronouns in Chinese. *Journal of PLA University of Foreign Languages.* Nov, 2007. Vol. 30. No. 6.

McCloskey, J. (1979). *Transformational Syntax and Model Theoretic Semantics: A Case-Study in Modern Irish.* D. Reidel Publishing Company.

McCloskey, J. (1990). Resumptive pronouns, Ā-binding and levels of representation in Irish. Hendrick, R. (ed.), *Syntax of the Modern Celtic languages*. Vol. 23 of *Syntax and Semantics*, 199–248. San Diego, CA: Academic Press.

McCloskey, J. (2002). Resumption, successive cyclicity, and the locality of operations. In Epstein, S. D., & Seely, T. D. (eds.). *Derivation and Exploration in the Minimalist Program,* 184-226. Oxford: Blackwell.

Mohanan, K. P. (1982). Grammatical relations and clause structure in Malayalam. In *The Mental Representation of Grammatical Relations*. Bresnan, J. (ed.). 1982b.

Peters, P. (2013). *The Cambridge Dictionary of English Grammar.* Cambridge University Press, Cambridge.

Richards, J. C., Platt, J., & Platt, H. (1992). *Dictionary of Language Teaching & Applied Linguistics.* Longman Dictionaries.

Sells, P. (1984). *Syntax and Semantics of Resumptive Pronouns.* PhD dissertation. University of Massachusetts, Amherst.

Shen, Y., & Dong, H. (2004). Direct command and the referential rules of the third personal pronoun *ta* within syntactic structures in Chinese. *Chinese Language.* Jan, 2004.

Shlonsky, U. (1992). Resumptive pronouns as a last resort. *Linguistic Inquiry* 23: 443–468.

Song, H. (2006). Do resumptive pronouns exist in Chinese? A comparison between English and Chinese. *Journal of Nanjing Xiaozhuang University.* May, 2006.

Willis, D. (2000). On the distribution of resumptive pronouns and wh-trace in Welsh. *Journal of Linguistics* 36: 531–573.

Xu, L. (2006). Topicalization in Asian languages. Everaert, M., & van Riemsdijk, H. (eds.) In *The Blackwell Companion to Syntax.* Vol. IV. Malden: Blackwell.

Xu, Y. (2013). The study of the distribution of resumptive pronouns in Chinese constructions. *Journal of Fuyang Teachers College.* 2013. No. 1.

Yang, C. (2008). Is there movement in both Chinese and English? *Foreign Languages Teaching and Research.* Vol. 40. 1.

Yang, C. (2012). The syntax of resumptive pronouns in Chinese relative structures. *Modern Foreign Languages.* Nov, 2012. Vol. 35.

Zaenen, A. (1980). *Extraction Rules in Icelandic.* Ph.D dissertation. Harvard University. Reprinted by Garland Press, New York, 1985.

Zhang, H. (trans.) (2013). *The syntax of Chinese* (Chinese version). Cambridge University Press & Word Publishing Corporation.

Appendix

These f-structures presented here are about the relativization of the GFs mentioned in Chapter 2 (except for the relativization of the Highest SUBJ, which has already been studied in detail in Chapter 3). These f-structures further indicate that our extending the *Nonthematic Condition* to *Anaphoric Binding* is reasonable.

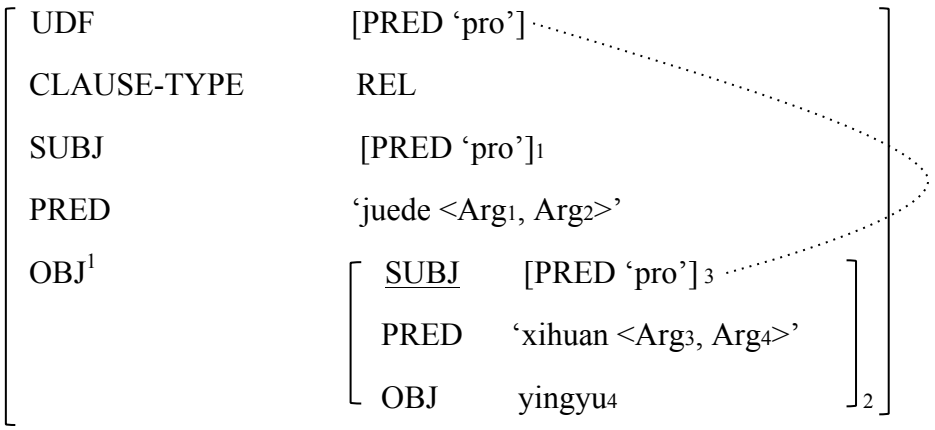
Embedded SUBJ:

(5) a. wo juede (ta) xihuan yingyu de nage ren

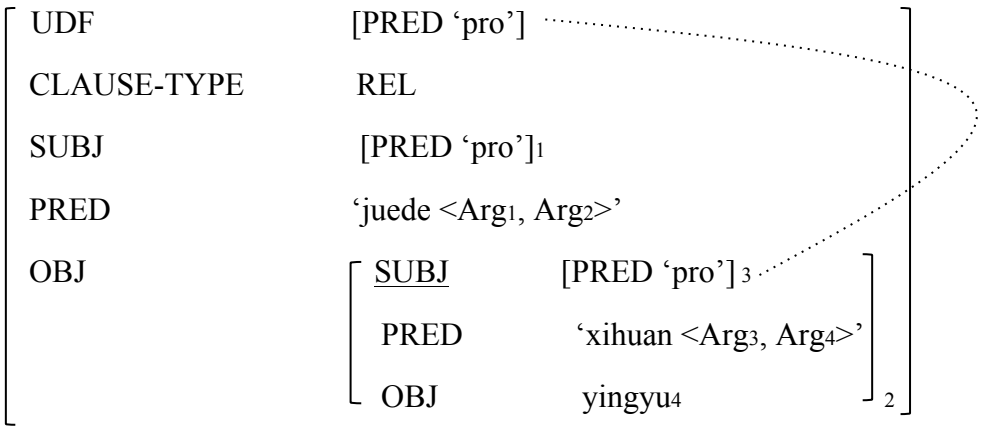
I think (he) like English DE the person

'the man that I think he likes English'

Overt RP: Value of SUBJ coming from the pronoun *ta* (he):



Without RP: Value of SUBJ coming from the verb *xihuan* (like):



[1] We follow Alsina (2005) in replacing COMP with OBJ in our f-structures.

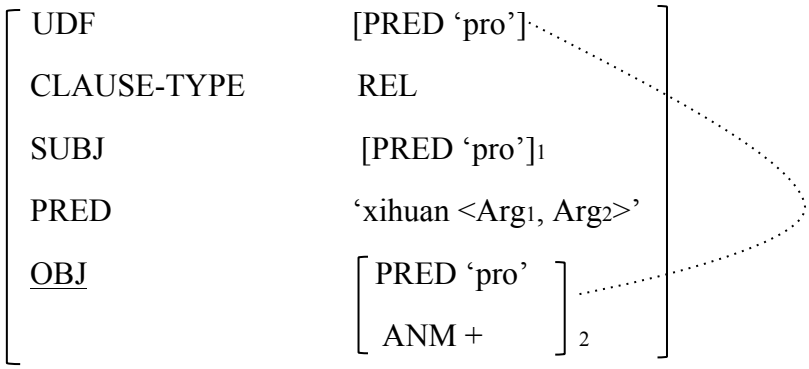
Monotransitive verb, OBJ with [+anm] feature:

(10) a. Wo xihuan (ta) de nage nvhai

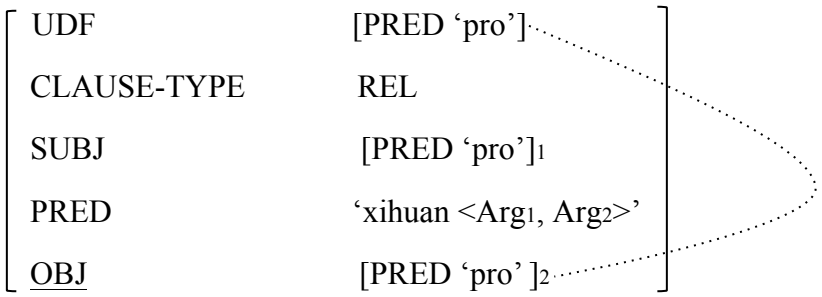
I like (her) DE that girl

'the girl that I like'

Overt RP: Value of OBJ coming from the pronoun *ta* (her):



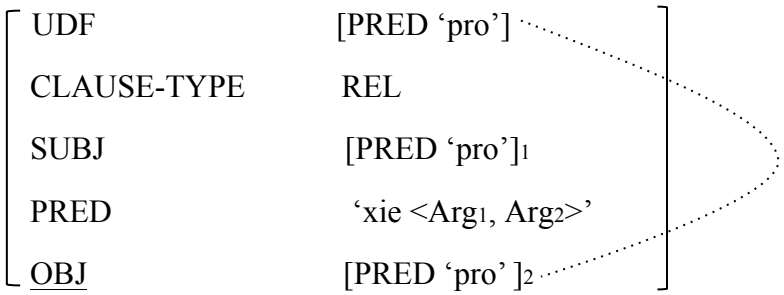
Without RP: Value of OBJ coming from the verb *xihuan* (like):



Monotransitive verb, OBJ with [-anm] feature:

(11) c. ni xie (*ta) de lunwen
you write (*it) DE lunwen
'the thesis that you write'

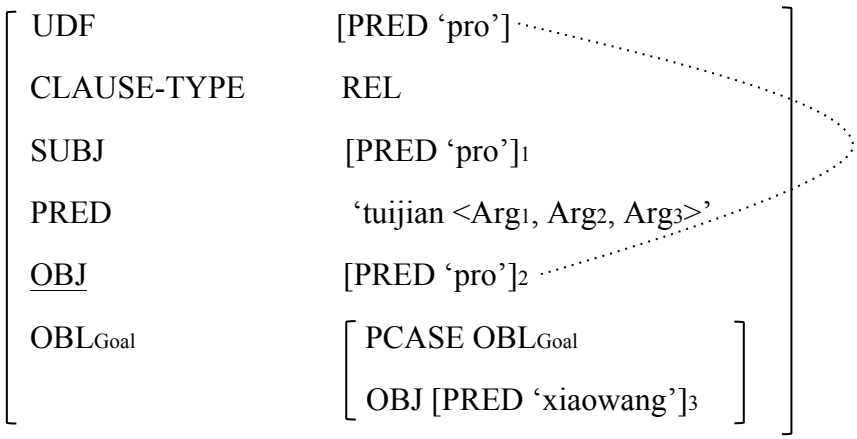
Without RP: Value of OBJ coming from the verb *xie* (write):



Oblique-goal construction, **OBJ with [-anm] feature**:

(12) a. wo tuijian (*ta) gei xiaowang de nabu dianying
I recommend (*it) to xiaowang DE the film
'the film that I recommend to xiaowang'

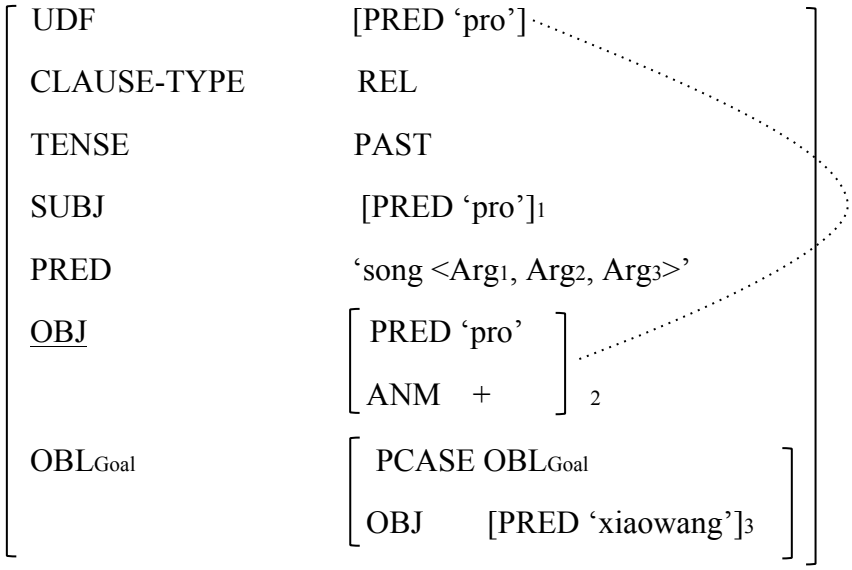
Without RP: Value of OBJ coming from the verb *tuijian* (recommend):



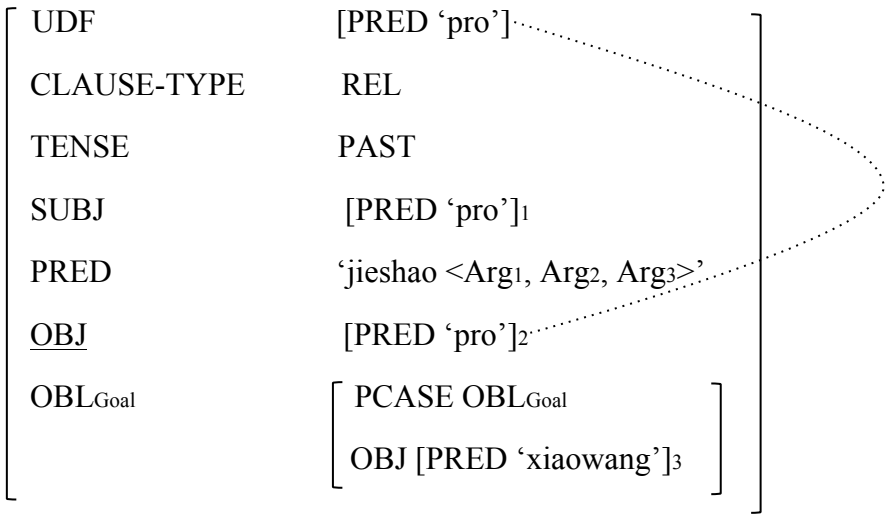
Oblique-goal construction, **OBJ with [+anm] feature**:

(12) c. wo jieshao-guo (ta) gei xiaowang de nage pengyou
I introduce-PAST (him) to xiaowang DE the friend
'the friend that I introduced to xiaowang'

Overt RP: Value of OBJ coming from the pronoun *ta* (him).



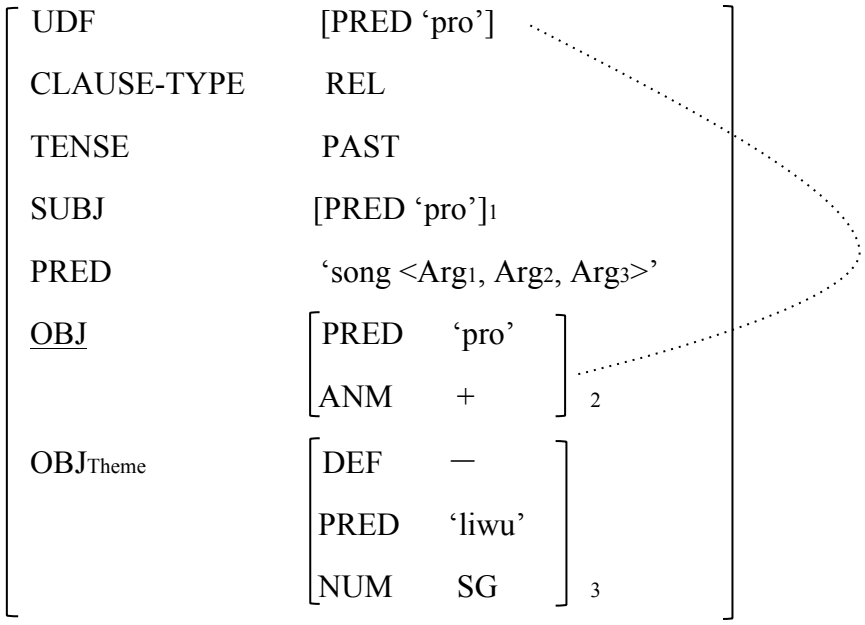
Without RP: Value of OBJ coming from the verb *jieshao* (introduce):



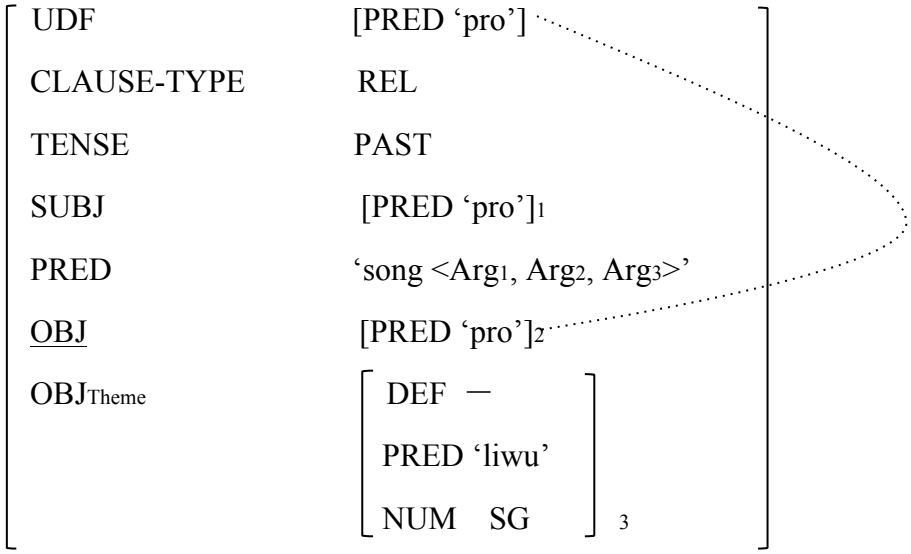
Ditransitive construction, **OBJ with [+anm] feature**:

(13) a. wo song-le (ta) yifen liwu de nage nvhai
I give-PAST (her) a present DE the girl
'the girl that I gave a present'-

Overt RP: value of OBJ coming from the pronoun *ta* (her):



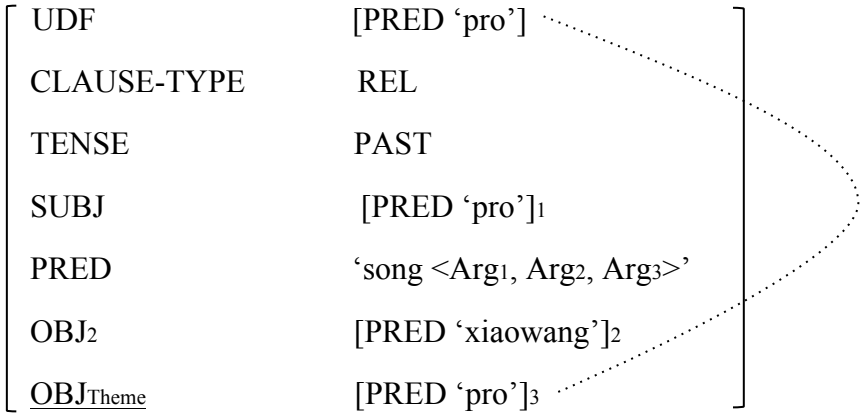
Without RP: value of OBJ coming from the verb *song* (give):



Ditransitive construction, **OBJ$_\theta$ with [-anm] feature**

(8) b'. wo song-le xiaowang (*ta) de nafen liwu
I give-PAST xiaowang (*it) DE the present
'the present I gave to xiaowang'

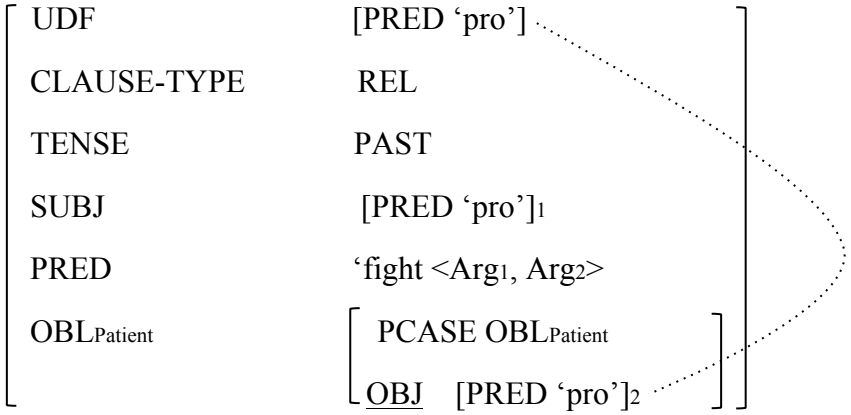
Overt RP: value of $\underline{\text{OBJ}}_{\text{Theme}}$ coming from the possessive pronoun *ta* (it):



OBL$_\theta$:

(15) a. ni gen *(ta) da-guo-jia de nage haizi
you with *(him) fight-PAST DE the child
'the child that you fought with'

Overt RP: value of $\text{OBL}_{\text{Patient}}$ $\underline{\text{OBJ}}$ coming from the pronoun *ta* (him):



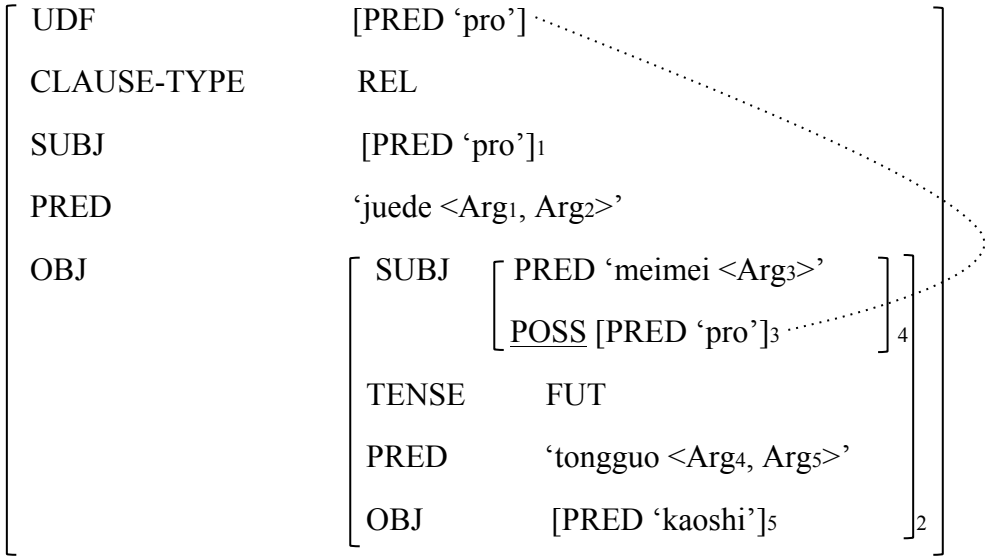
POSS-embedded SUBJ:

(18) c. wo juede *(ta) meimei kaoshi hui-tongguo de nage nanhai

I think *(his) sister exam FUT PART-pass DE the boy

'the boy that I think his sister will pass the exam'

Overt RP: value of POSS coming from the possessive *ta* (his):



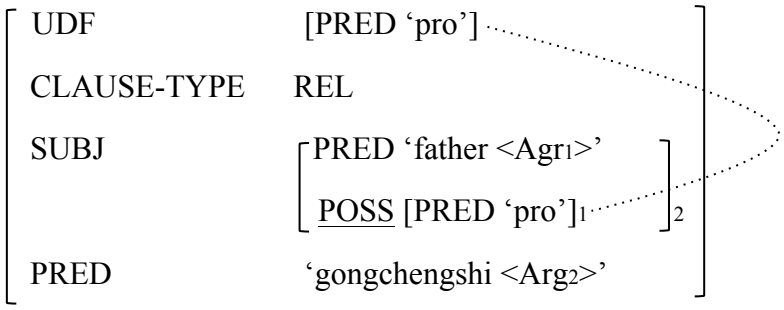
POSS-highest SUBJ:

(19) b. *(ta) fuqin shi gongchengshi de nawei guniang

*(her) father is engineer DE the girl

'the girl that her father is an engineer'

Overt RP: value of POSS coming from the possessive *ta* (his):



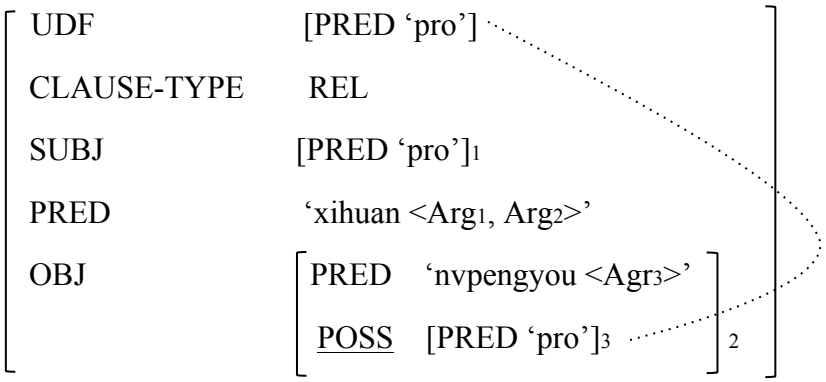
POSS-Monotransitive OBJ:

(20) a. wo xihuan *(ta) nvpengyou de nage ren

I like *(his) girlfriend DE the person

'the person that I like *(his) girlfriend'

Overt RP: value of POSS coming from the possessive *ta* (his):



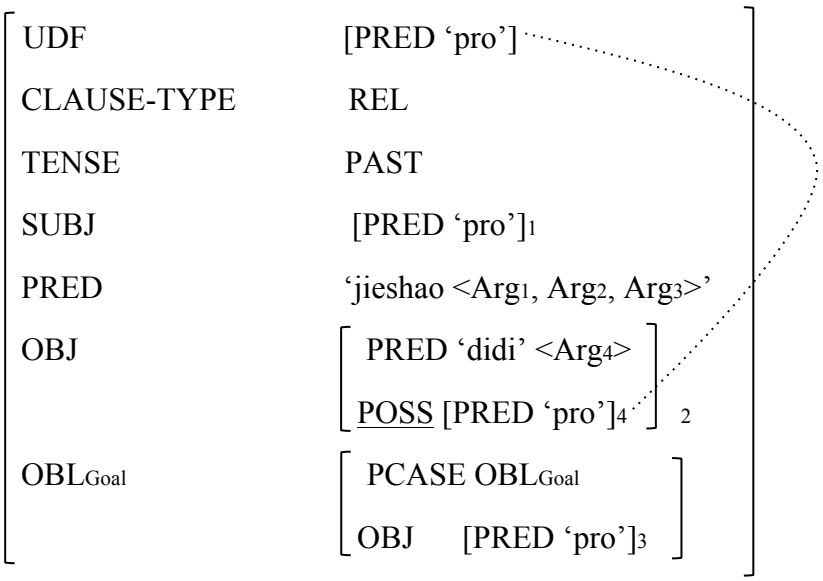
POSS-OBJ in *Oblique-goal construction*:

(21) a. wo jieshao-guo *(ta) didi gei ni de nage nvhai

I introduce-PAST *(her) brother to you DE the girl

'the girl that I introduced her brother to you'

Overt RP: value of POSS coming from the possessive *ta* (her):



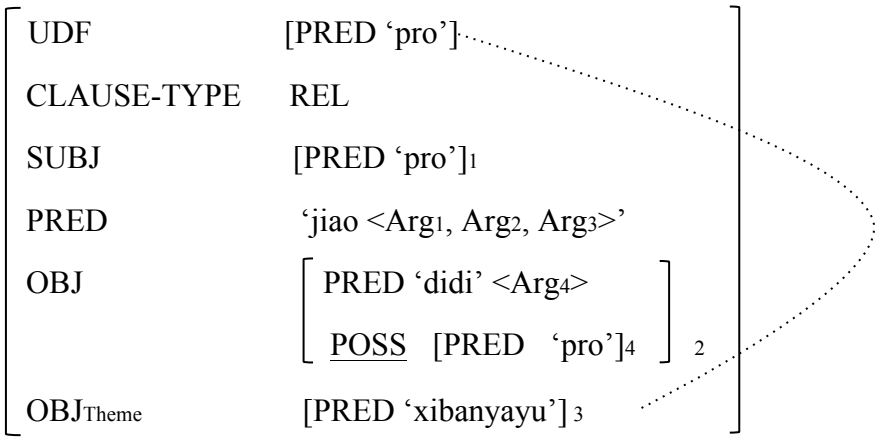
POSS-OBJ in *Ditransitive construction*:

(22) a. wo jiao *(ta) didi xibanyayu de nage nvhai

I teach *(her) brother Spanish DE the girl

'the girl that I teach her brother Spanish'

Overt RP: value of POSS coming from the possessive *ta* (her):



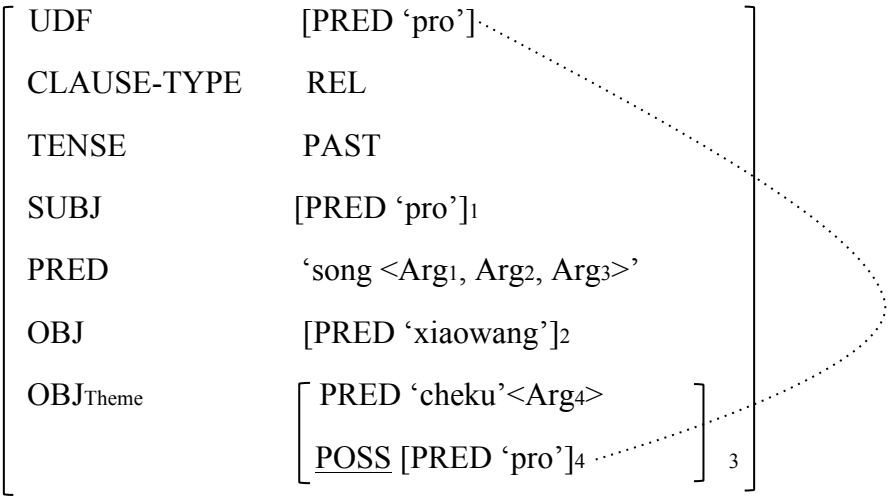
POSS-OBJ$_\theta$ in *Ditransitive construction*:

(23) a. wo song-le xiaowang *(tade) cheku de nage fangzi

I give-PAST xiaowang *(its) garage DE the house

'the house that I gave xiaowang its garage'

Overt RP: value of POSS coming from the possessive *ta* (its):



POSS-OBL$_0$:

(24) a. ni gen *(ta) meimei da-guo-jia de nage haizi
you with *(his) sister fight-PAST DE the child
'the child that you fought with his sister'

Overt RP: value of POSS coming from the possessive *ta* (his):