# A Comparative Study on the Structure of Relative Clauses in Nuosu Yi and Mandarin Chinese*

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## 1. Introduction

a. The main goal of this talk is to
   i. to understand the structure and semantics of Nuosu Yi RCs
   ii. to explore language universals and micro-variation within the same language family concerning relativization by comparing Nuosu Yi with other (well-studied) languages like Mandarin Chinese.

b. We will discuss four issues:
   i. what can be relativized in Nuosu Yi? (Section III)
   ii. What are the relativization strategies employed in Nuosu Yi? (Section IV)
   iii. How are the head nouns of RCs in Nuosu Yi derived? (Section V)
   iv. What are the possible structures of Yi relative clauses? (Section VI)

## 2. Language Background and Previous generalizations of Nuosu Yi RCs

- Yi belongs to Tibeto-Burman languages within the Sino-Tibetan language family (Benedict 1972; Bradley 1997, Sun 1998; Matisoff 2003)
- The standard as well as the best preserved Yi language is its northern dialect, which is referred to as *Nuosu Yi*, spoken in the Southern Sichuan and the Northern Yunnan, China (Hu 2002, Gerner 2013). For simplicity, I will refer to *Nuosu Yi* as Yi.
- The basic word order of Yi is SOV (Fu 1997; Chen and Wu 1998; Bradley 1990), but clauses with resultative predicates/auxiliaries exhibit a fixed OSV order (Gerner 2004, 2013)
- Similar to Mandarin, which allows pro-drop (Huang 1984), Yi is also pro-drop language (i.e. zero-anaphora is allowed for both S and O) (Gerner 2013).
- Similar to Mandarin, Yi is a classifier language, but unlike Mandarin and most other classifier languages, Yi has an overt definite article determiner ***su*** which differs from other members in the determiner family, like *this* or *that* (Jiang and Hu 2010; Jiang 2012; Gerner 2013).

* This study received Humanities Council's 2015 Summer Research Project funding from UHM. Most data from Nuosu Yi in this paper were collected from consultant work with two native Nuosu Yi speakers from Summer 2015 to Spring 2016 in Beijing China; some data were provided by one of the authors Suhua Hu, a native speaker linguist of Nuosu Yi. Data from the literature will be duly noted. We are grateful to Gennaro Chierchia, Kamil Deen, Shinichiro Fukuda, C.-T. James Huang, William O'Grady for discussion and valuable suggestions. We also would like to thank the two Nuosu Yi informants, Mahai, Wuniu and Wuni, Muji. We are responsible for all the remaining errors and inadequacies.

(1) a. mu$^{33}$ sɔ$^{33}$ *(ma$^{33}$)
horse three CL
'three horses'
b. mu$^{33}$ **a$^{33}$dʐ̩$^{44}$** sɔ$^{33}$ ma$^{33}$
horse Dem three CL
'those three horses'
c. mu$^{33}$ sɔ$^{33}$ ma$^{33}$ **su$^{33}$**
horse three CL SU
'the three horses'
d. *mu$^{33}$ **a$^{33}$dʐ̩$^{44}$**
horse Dem
Intended: 'that horse'
e. *mu$^{33}$ **su$^{33}$**
horse SU
Intended: 'the horse'

(2) a. mu$^{33}$ ma$^{33}$ **su$^{33}$**
horse CL SU
'the horse'
b. mu$^{33}$ **a$^{33}$dʐ̩$^{44}$** ma$^{33}$
horse Dem CL
'that horse'
c. mu$^{33}$
horse
'(the) horses, the horse'
d.mu$^{33}$ ma$^{33}$
horse CL
'a horse'

- Two types of restrictive RCs in Yi (Hu and Jiang 2010; Jiang and Hu 2013; Gerner 2013)

(3) **Type 1: Classifier-less RCs**
a. **ʑo$^{33}$** Mary l̥u$^{55}$ **su$^{33}$** ndzɻ̩$^{55}$ dʑɪ$^{33}$ ndzɻ̩$^{55}$.
sheep Mary herd SU fat, beautiful very fat, beautiful
'The sheep that Mary herds are very fat.' (Jiang and Hu 2010)
- ♣ This type of RCs can receive a generic, definite and indefinite interpretation and can be interpreted as singular or plural (Jiang and Hu 2013)
- ♣ This type of RCs is superficially similar to be the *de*-RCs in Mandarin (3b) and the *ge*-RCs in Cantonese (3c).

b. [Mali fangmu de] **yang** hen fei (Mandarin)
Mary herd De sheep very fat
The sheep that Mary herds are very fat.

c. [keoi$^{5}$ coeng$^{3}$ ge$^{3}$] **go**$^{1}$ (Cantonese)

3SG sing PRT song

'the song(s) that she sings'. (Matthews & Yip 1994)

(4) **Type 2: Classifier RCs**

a. vo$^{55}$ Mary ho$^{33}$ ta$^{33}$ **ma$^{33}$** John kɯ$^{31}$ si$^{55}$ dzɯ$^{33}$ o$^{44}$.

pig Mary feed RESULT CL John AGENT kill eat SFP

'John killed a pig that Mary fed.'

♣ The classifier in (4a) appears in the end of the RCs, and this type of RCs can only be interpreted as *indefinites* and *singular (unless a plural classifier is used)*

♣ The 2nd type RCs in Yi is **not available in Mandarin** (4b):

b. * Mali wei zhi **yang** hen fei (Mandarin)

Mary herd Cl sheep very fat

Intended: 'The sheep(s) that Mary herds is/are very fat.'

♣ But it seems to be the counterpart of the Classifier RCs in Cantonese (4c):

c. Ngóh yiu wán **go** yàhn m̀h háidouh (Cantonese)

I need seek CL person not here

'The person I'm looking for is not here.' (Matthews & Yip 1994)

♣ Recall that the Yi RC in (4a) is indefinite only; in order to make it definite, either the definite determiner *su* can be added in the position following the classifier (4d):

d .vo$^{55}$ Mary ho$^{33}$ ta$^{33}$ **ma$^{44}$ su$^{33}$** John kɯ$^{31}$ si$^{55}$ dzɯ$^{33}$ o$^{44}$.

pig Mary feed RESULT CL the John AGENT kill eat SFP

'John killed the pig that Mary fed.'

♣ Or a demonstrative can be added in the position preceding the classifier (4e):

e .vo$^{55}$ Mary ho$^{33}$ ta$^{33}$ **a$^{33}$dʐɿ$^{44}$ ma$^{44}$** John kɯ$^{31}$ si$^{55}$ dzɯ$^{33}$ o$^{44}$.

pig Mary feed RESULT DEM CL John AGENT kill eat SFP

'John killed the pig that Mary fed.'

- **Note that, there could be other ways to classify Yi restrictive RCs:**

(5) Three (or Four) types of restrictive RCs in Yi

a. Type 1: Classifier-less su-RCs (e.g. (3a))

b. Type 2: Classifier RCs (e.g. (4a))

c. Type 3: Classifier su-RCs (e.g. (4d))

(d. Type 4: Classifier Dem-RCs) (e.g. (4e))

- Our motivations for dividing Yi Restrictive RCs into two types as in (3) and (4):

(6) a. Semantic motivation:
i. Classifier-less RCs (3) are number neutral (plural and/or singular) and can be interpreted as definite, indefinite and generic, depending on the context.
ii. In contrast, Classifier RCs (4) are number specific (i.e. always singular with individual classifiers, and always plural with the plural classifier) and can only be interpreted in one way (i.e. either indefinite when there is no *su* or Dem or definite when *su* or Dem appears)

b. Typological motivation:
The second types of RCs, i.e. Classifier RCs, seems to be typologically rarer than the first type, i.e. Classifier-less RCs. For example, Mandarin, Japanese and Korean have the first type but not the second type.

- In previous studies on the syntax of RCs within generative grammar, two issues are in the center of discussion:

i. the derivation of the head noun, and
ii. the relative construction

- Regarding Mandarin RCs, it has been argued that
  i. they involve both movement and base-generation (e.g. Huang 1982; Aoun and Li 2003; Huang et al 2009)

  ii. Simpson (2002) proposes a complementation structure for Mandarin RCs, but Aoun and LI (2003) and Del Gobbo (2003) argue for a adjunction structure.

- Regarding Yi RCs, our previous proposals (Hu and Jiang 2010; Jiang and Hu 2013) are:
  i. The head noun is derived via movement
  ii. The structure is adjunction

  ♣ Problems:
    a. no detailed examination on what type of elements can be relativized in Yi and what the relativization strategies are available.
    b. no arguments have been provided for the proposed derivation of head nouns and the relative structure
  ♣ In the following sections, we will address these problems.

## 3. What can be relativized in Yi?

- Gerner (2013:94) observes that NPs that bear the semantic roles of Agent, Patient and Recipient can be relativized in Yi and claims that only NPs that bear these three roles can be relativized.

- On the top of Gerner's (2013)'s observation, we observe that a much wider range of NPs can be relativized in Yi:

♣ **Generalization #1**:

Yi can relativize elements in all of the positions in Noun Phrase Accessibility Hierarchy (NPAH) proposed in Keenan and Comrie (1977): Subj > DO > IO > OBl > Gen > OComp.

♣ **Generalization #2**:

The semantic roles that the relativzed NPs can bear include Agent, Patient, Recipient, Experiencer, Theme, Instrument, Location and Time.

**1、Subject$_{\text{Agent/Experiencer/Theme}}$ Relativization**

(7) a. su$^{33}$li$^{55}$ ma$^{33}$ mu$^{33}$ dzɪ$^{33}$ ta$^{33}$ la$^{33}$ o$^{44}$.
boy CL horse ride Adv$_{\text{manner}}$ come PERF
'A boy came riding on a horse.

b. [su$^{33}$li$^{55}$$_i$ [[e$_i$] mu$^{33}$ dzɪ$^{33}$ta$^{33}$ la$^{33}$]] ma$^{44}$ su$^{33}$ kha$^{55}$ bo$^{33}$ o$^{44}$?
boy horse ride Adv$_{\text{manner}}$ come CL the where go PERF
'Where did the boy who came riding on a horse go?

(8) a. tɕho$^{31}$ a$^{33}$ȵi$^{33}$ a$^{33}$ʤɿ$^{44}$ ma$^{33}$ tɕho$^{31}$ a$^{33}$vu$^{55}$ a$^{33}$ʤɿ$^{44}$ ma$^{33}$ nbe$^{33}$.
ball red DEM CL ball green that CL hit
'That red ball hit that green ball.'

b. [tɕho$^{31}$ a$^{33}$ȵi$^{33}$$_i$ [ [e$_i$] tɕho$^{31}$ a$^{33}$vu$^{55}$ nbe$^{33}$]] a$^{33}$ʤɿ$^{44}$ ma$^{33}$ tshi$^{33}$ bo$^{33}$ o$^{44}$.
ball red ball green hit DEM CL fall-down Asp
'That red ball that hit the green ball fell down.'

**2、Object$_{\text{Theme/Patient}}$ Relativization**

(9) a. a$^{44}$mu$^{33}$ ʑo$^{33}$ lu$^{55}$.
Amu sheep herd
'Amu herds sheep.'

b. ʑo$^{33}$$_i$ [ a$^{44}$mu$^{33}$ [e$_i$] lu$^{55}$ a$^{33}$ʤɿ$^{44}$ ma$^{44}$] ndzɻa$^{55}$ dzɪ$^{33}$ ndzɻa$^{55}$.
sheep Amu herd DEM CL fat, beautiful very fat, beautiful
'That sheep that Amu herds is very fat.'

(10) a. a$^{44}$mu$^{33}$ ʨɿ$^{31}$ɬe$^{33}$ a$^{33}$ʤɿ$^{44}$ ma$^{33}$ he$^{33}$vu$^{33}$.
Amu girl DEM CL like
'Amu likes that girl.'

b. [ʨɿ$^{31}$ɬe$^{33}$$_i$ [a$^{44}$mu$^{33}$ ko$^{44}$$_i$ he$^{33}$vu$^{33}$]] a$^{33}$ʤɿ$^{44}$ ma$^{33}$ bo$^{33}$ o$^{44}$.
girl Amu 3S.ACC like DEM CL go PERF
'That girl whom Amu likes left.'

♣ without ko$^{44}$ , the sentence in (10b) receives a different interpretation (i.e. subject relativization interpretation):

c. [ʨɿ$^{31}$ɬe$^{33}$ [a$^{44}$mu$^{33}$ he$^{33}$vu$^{33}$]] a$^{33}$ʤɿ$^{44}$ ma$^{33}$ bo$^{33}$ o$^{44}$.
girl Amu like DEM CL go PERF
'That girl who likes Amu left.' **Not**: 'That girl whom Amu likes left.'

d. [**ʈʂʅ$^{31}$ɬe$^{33}$$_{i}$** [**[e$_{i}$]** a$^{44}$mu$^{33}$ he$^{33}$vu$^{33}$]] a$^{33}$ʤʅ$^{44}$ ma$^{33}$ bo$^{33}$ o$^{44}$.
girl Amu like DEM CL go PERF
'That girl who likes Amu left.'

(11) a. tʂho$^{31}$ a$^{33}$n̥i$^{33}$ a$^{33}$ʤʅ$^{44}$ ma$^{33}$ tʂho$^{31}$ a$^{33}$vu$^{55}$ a$^{33}$ʤʅ$^{44}$ ma$^{33}$ nbe$^{33}$.
ball red DEM CL ball green that CL hit
'That red ball hit that green ball.'

b. [tʂho$^{31}$ a$^{33}$vu$^{55}$$_{i}$ [tʂho$^{31}$ a$^{33}$n̥i$^{33}$ **ko$^{44}$$_{i}$** nbe$^{33}$]] a$^{33}$ʤʅ$^{44}$ ma$^{33}$ tshi$^{33}$ bo$^{33}$ o$^{44}$.
ball green ball red 3S- ACC hit DEM CL fall-down Asp
'That green ball that the red ball hit fell down.'

♣ without **ko$^{44}$** , the sentence in (11b) receives a different interpretation (i.e. subject relativization interpretation) :

c. [tʂho$^{31}$ a$^{33}$vu$^{55}$ [tʂho$^{31}$ a$^{33}$n̥i$^{33}$ nbe$^{33}$]] a$^{33}$ʤʅ$^{44}$ ma$^{33}$ tshi$^{33}$ bo$^{33}$ o$^{44}$.
ball green ball red hit DEM CL fall-down Asp
'That green ball that hit the red ball fell down.'
**Not**: 'That green ball that the red ball hit fell down.'

e. [tʂho$^{31}$ a$^{33}$vu$^{55}$$_{i}$ **[e$_{i}$]** tʂho$^{31}$ a$^{33}$n̥i$^{33}$ nbe$^{33}$]] a$^{33}$ʤʅ$^{44}$ ma$^{33}$ tshi$^{33}$ bo$^{33}$ o$^{44}$.
ball green ball red hit DEM CL fall-down Asp
'That green ball that hit the red ball fell down.'

### 3、DO$_{\text{Theme}}$ Relativization

(12) a. a$^{44}$mu$^{33}$ ve$^{44}$ve$^{33}$ pu$^{33}$/ mu$^{33}$ ma$^{44}$ ka$^{33}$ ʂʅ$^{31}$ɬe$^{33}$ a$^{33}$ʤʅ$^{44}$ ma$^{33}$ bʅ$^{31}$.
Amu flower CL horse CL AUX girl that CL give
'Amu gave that girl a flower/horse.'

b. [**ve$^{44}$ve$^{33}$/ mu$^{33}$$_{i}$** [a$^{44}$mu$^{33}$ **[e$_{i}$]** ka$^{33}$ ʂʅ$^{31}$ɬe$^{33}$ a$^{33}$ʤʅ$^{44}$ ma$^{33}$ bʅ$^{44}$]] a$^{33}$ʤʅ$^{44}$ pu$^{33}$/ma$^{44}$
flower/horse Amu AUX girl DEM CL give DEM CL
ʤʑe$^{55}$-a$^{31}$-gɯ$^{33}$ o$^{44}$.
see$_{\text{<NEG>}}$[1] PERF
'That flower/horse that Amu gave *(to) that girl disappeared.'

### 4、IO$_{\text{Recipient}}$ Relativization

(13) a. a$^{44}$mu$^{33}$ ve$^{44}$ve$^{33}$ pu$^{33}$ ka$^{33}$ ʂʅ$^{31}$ɬe$^{33}$ a$^{33}$ʤʅ$^{44}$ ma$^{33}$ bʅ$^{31}$.
Amu flower CL AUX girl that CL give
'Amu gave that girl a flower.'

b. [**ʈʂʅ$^{31}$ɬe$^{33}$$_{i}$** [a$^{44}$mu$^{33}$ ve$^{44}$ve$^{33}$ pu$^{33}$ ka$^{33}$ *(**ko$^{33}$$_{i}$**) bʅ$^{44}$]] a$^{33}$ʤʅ$^{44}$ ma$^{33}$
girl Amu flower CL AUX 3S.ACC give DEM CL
ʤʑe$^{55}$ a$^{31}$gɯ$^{33}$ o$^{44}$.
see$_{\text{<NEG>}}$ PERF
'That girl to whom Amu gave (*her) a flower disappeared.'

♣ without **ko$^{44}$** , the sentence in (13b) is ungrammatical

[1] The negation particle in Yi is a$^{31}$ which can be a prefix or an infix depending on the syllable structure of the verb/ adjective (Gerner 2013: 404-406). In (9b), a$^{31}$ is an infix which is placed before the last syllable of the verb.

**5、Complement of Obl/Dat(Instrument/Theme )Relativization**

(14) a. a$^{44}$mu$^{33}$ **do$^{44}$mu$^{33}$ si$^{31}$** ʑo$^{33}$ si$^{55}$ .
Amu knife INSTR sheep kill
'Amu kills sheep with a knife.'

b. [**do$^{44}$mu$^{33}$**$_{i}$ [a$^{44}$mu$^{33}$ **[e$_{i}$]** **si$^{31}$** ʑo$^{33}$ si$^{55}$]] tɕi$^{44}$ su$^{33}$ dʑe$^{55}$ a$^{31}$gɯ$^{33}$ o$^{44}$.
knife Amu INSTR sheep kill CL the see$_{<NEG>}$ PERF
'The knife with which Amu kills sheep disappeared.'

(15) a. a$^{44}$mu$^{33}$ ʂɿ$^{31}$ɬe$^{33}$ a$^{33}$ʤɿ$^{44}$ ma$^{33}$ tɕo$^{44}$ ʐa$^{33}$ ndʑɔ$^{33}$。
Amu girl DEM CL DAT talk PROG
'Amu is talking with that girl.'

b. [**ʂɿ$^{31}$ɬe$^{33}$**$_{i}$ [a$^{44}$mu$^{33}$ **ko$^{33}$**$_{i}$ tɕo$^{44}$ ʐa$^{33}$ ndʑɔ$^{33}$]] a$^{33}$ʤɿ$^{44}$ ma$^{33}$ kha$^{44}$ di$^{33}$ŋɯ$^{33}$?
girl Amu 3S◦ ACC DAT talk PROG DEM CL who be
'Who is that girl with whom Amu is talking.'

♣ without **ko$^{44}$** , the sentence in (15b) receives a different interpretation (i.e. subject relativization interpretation):

c. **[ʂɿ$^{31}$ɬe$^{33}$** [a$^{44}$mu$^{33}$ tɕo$^{44}$ ʐa$^{33}$ ndʑɔ$^{33}$]] a$^{33}$ʤɿ$^{44}$ ma$^{33}$ kha$^{44}$ di$^{33}$ŋɯ$^{33}$?
girl Amu DAT talk PROG DEM CL who be
'Who is that girl that is talking with Amu.'

d. **[ʂɿ$^{31}$ɬe$^{33}$**$_{i}$ [**[e$_{i}$]** a$^{44}$mu$^{33}$ tɕo$^{44}$ ʐa$^{33}$ ndʑɔ$^{33}$]] a$^{33}$ʤɿ$^{44}$ ma$^{33}$ kha$^{44}$ di$^{33}$ŋɯ$^{33}$?
girl Amu DAT talk PROG DEM CL who be
'Who is that girl that is talking with Amu.'

**6、Gen/Possessor Relativization**

(16) a. ʂɿ$^{31}$ɬe$^{33}$ a$^{33}$ʤɿ$^{44}$ ma$^{33}$ dzɯ$^{33}$mo$^{31}$ tsho$^{33}$ khu$^{33}$ si$^{44}$ bo$^{33}$。
girl DEM CL money man steal LINK go
'That girl's money was stolen by a man.'

b. [**ʂɿ$^{31}$ɬe$^{33}$**$_{i}$ [(**tshɿ$^{31}$**$_{i}$) dzɯ$^{33}$mo$^{31}$ tsho$^{33}$ khu$^{33}$ si$^{44}$ bo$^{33}$]] a$^{33}$ʤɿ$^{44}$ ma$^{33}$
girl 3Sg-GEN money man steal LINK go DEM CL
dʑe$^{55}$ a$^{31}$gɯ$^{33}$ o$^{44}$.
see$_{<NEG>}$ PERF
'That girl whose money was stolen by a person disappeared.'

♣ In (16b), the third person singular genitive pronoun tshɿ$^{31}$.

**7、Complement in Comparatives$_{Theme}$ Relativization**

(17) a. a$^{44}$mu$^{33}$ ʂɿ$^{31}$ɬe$^{33}$ a$^{33}$ʤɿ$^{44}$ ma$^{33}$ ʑɿ$^{31}$ a$^{31}$tshɿ$^{33}$.
Amu girl DEM CL old more-than
'Amu is older than that girl.'

b. [**ɕɿ$^{31}$ɬe$^{33}$** [a$^{44}$mu$^{33}$ **ko$^{33}$** ʑɿ$^{31}$ a$^{31}$tshɿ$^{33}$ ]] a$^{33}$ʤɿ$^{44}$ ma$^{33}$
girl Amu 3S- ACC old more-than DEM CL
dʑe$^{55}$ a$^{31}$gɯ$^{33}$ o$^{44}$.
see$_{<NEG>}$ PERF
'That girl than whom Amu is older disappeared.'

♣ without **ko$^{44}$** , the sentence in (17b) receives a different interpretation (i.e. subject relativization interpretation):

c. [**ɕɿ$^{31}$ɬe$^{33}$** [a$^{44}$mu$^{33}$ ʑɿ$^{31}$ a$^{31}$tshɿ$^{33}$ ]] a$^{33}$ʤɿ$^{44}$ ma$^{33}$
girl Amu old more-than DEM CL
dʑe$^{55}$ a$^{31}$gɯ$^{33}$o$^{44}$.
see$_{<NEG>}$ PERF
'That girl who is older than Amu disappeared.'

d. [**ɕɿ$^{31}$ɬe$^{33}$** [ **[e]** a$^{44}$mu$^{33}$ ʑɿ$^{31}$ a$^{31}$tshɿ$^{33}$ ]] a$^{33}$ʤɿ$^{44}$ ma$^{33}$
girl Amu old more-than DEM CL
dʑe$^{55}$ a$^{31}$gɯ$^{33}$o$^{44}$.
see$_{<NEG>}$ PERF
'That girl who is older than Amu disappeared.'

- In addition to relativization of arguments as shown above, adjuncts, such as Location and Time, in Yi can undergo relativization as well:

**8、Location Relativization**

(18) a. a$^{44}$mu$^{33}$ ʑi$^{33}$ a$^{33}$ʤɿ$^{44}$ ma$^{33}$ ko$^{33}$ta$^{33}$ thɯ$^{31}$ʑɿ$^{33}$ hɯ$^{31}$ ndʑɔ$^{33}$.
Amu house DEM CL LOC book read PROG
'Amu is reading book in that house'.

b. [**ʑi$^{33}$$_{i}$** [a$^{44}$mu$^{33}$ a$^{33}$di$^{55}$$_{i}$ ko$^{33}$ta$^{33}$ thɯ$^{31}$ʑɿ$^{33}$ hɯ$^{31}$ ndʑɔ$^{33}$]] a$^{33}$ʤɿ$^{44}$ ma$^{33}$
house Amu there LOC book read PROG DEM CL
ndzạ$^{55}$ ma$^{33}$ ŋɯ$^{33}$.
beautiful CL be
'That house where Amu is reading book is a beautiful house.

c. [**ʑi$^{33}$** [a$^{44}$mu$^{33}$ thɯ$^{31}$ʑɿ$^{33}$ hɯ$^{31}$ ndʑɔ$^{33}$ dɯ$^{33}$ ]] a$^{33}$ʤɿ$^{44}$ ma$^{33}$
house Amu book read PROG place/where DEM CL
ndzạ$^{55}$ ma$^{33}$ ŋɯ$^{33}$.
beautiful CL be
'That house where Amu is reading book is a beautiful house.'

**9、Time Relativization**

(19) a. a$^{44}$mu$^{33}$ ʂɿ$^{33}$ȵi$^{33}$tshɿ$^{31}$khu$^{33}$ thɯ$^{31}$ʑɿ$^{33}$ zo$^{33}$ bo$^{33}$.
Amu year-before-last-year book learn go
'Amu went to school the year before last year.'

b. [**mu$^{33}$khu$^{55}$** [a$^{44}$mu$^{33}$ thɯ$^{31}$ʑɿ$^{33}$ zo$^{33}$ bo$^{33}$]] a$^{33}$ʤɿ$^{44}$ di$^{31}$ khu$^{55}$
year Amu book learn go DEM CL$_{year}$
mu$^{33}$ kɔ$^{33}$ khu$^{33}$.
drought CL$_{year}$
'The year when Amu went to school was a drought year.'

- Adjuncts such as Reason, Manner cannot be relativized in Yi.

## 4. What are relativization strategies employed in Nuosu Yi

- The two types of RCs in Yi, Classifier-less RCs and Classifier RCs, will be discussed separately.

### 4.1 Classifier-less RCs

- Gerner (2013:430-432) examines Classifier-less RCs (as in (3a) and repeated below) and observes that whether the Classifier-less *su*-RCs employs a gap strategy or a resumptive strategy depends on the word order (SOV or OSV) of the relative clause.

3a. **ʑo$^{33}$** Mary l̥u$^{55}$ **su$^{33}$** ndzɻa$^{55}$ dʑɪ$^{33}$ ndzɻa$^{55}$.
sheep Mary herd SU fat, beautiful very fat, beautiful
'The sheep that Mary herds are very fat.' (Jiang and Hu 2010)

- In particular, Gerner claims that the relativization of the initial NP of the relative clause requires the gap strategy and that the relativization of the non-initial NP requires a resumptive pronoun (RP).
- Based on Gerner (2013: 410-412), we summarize the relativization strategies of Classifier-less RCs in Nuosu Yi as follow:

(20) **Classifier-less RCs**

| | Obligatory Word Order | Relativized NP | Relativization strategy | Examples |
|---|---|---|---|---|
| a. | SOV | S | Gap | Gerner 2013: 431, (37) |
| b. | SOV | O | Resumptive Pronoun | Gerner 2013: 432, (40) |
| c. | OSV | O | Gap | Gerner 2013: 432, (39) |
| d. | OSV | S | Resumptive pronoun | Gerner 2013: 431, (38) |

♣ However, we observe that Gerner's claim about Classifier-less RCs cannot capture all data, such as the one below, in which the relativization of the non-initial NP in (21a) allows a gap (21b), contrary to the generalization in (20b):

(21) a. a$^{44}$mu$^{33}$ ʑo$^{33}$ l̥u$^{55}$. [SOV]
Amu sheep herd
'Amu herds sheep.'

b. ʑo$^{33}$$_{i}$ [ a$^{44}$mu$^{33}$ **[e$_{i}$]** l̥u$^{55}$ su$^{33}$] ndzɻa$^{55}$ dʑɪ$^{33}$ ndzɻa$^{55}$. [gap]
sheep Amu herd su fat, beautiful very fat, beautiful
'The sheep that Amu herds are very fat.'

♣ we are now in the process of further examining Classifier-less RCs.

## 4.2 Classifier RCs

- We have examined Classifier RCs with SOV word order (as in (4a) and repeated below) and observe that two factors are responsible for the relativization strategy.

4a. vo$^{55}$ Mary ho$^{33}$ ta$^{33}$ **ma$^{33}$** John kɯ$^{31}$ si$^{55}$ dzɯ$^{33}$ o$^{44}$.
pig Mary feed RESULT CL John AGENT kill eat SFP
'John killed a pig that Mary fed.'

♣ **Generalization #3**:
Whether Classifier RCs in Yi employ a gap strategy or a resumptive pronoun strategy depends on two factors:
(i) the position of relativized NP (sentence initial or not),
(ii) whether there is a clue (linguistic clues, such as s-selection of the predicates, or world-knowledge clues) to determine the themantic roles of the relativized NP (e.g. Agent, Patient, Experiencer, Theme)

(22) **Classifier RCs with SOV word:**

| Syntactic Position[2] | Clue for θ-role | Relativization Strategy | Examples |
|---|---|---|---|
| a. S | Yes/No | gap | (7b), (8b),<br>(10d), (11e)<br>(15d), (17d) |
| b. O<br>DO<br>Obl/Dat | Yes | gap | (9b), (12b)<br>(14b) |
| c. O<br>Obl/Dat/<br>OComp | No | Resumptive<br>Pronoun | (10b), (11b)<br>(15b) |
| d. IO | Yes | Resumptive<br>Pronoun | (13b) |
| e. Gen | Yes | gap or<br>Resumptive<br>Pronoun | (16b) |

[2] In Section 3, we use Keenan and Comrie's (1977) hierarchy to provide a description of the positions that allow relativization in Yi. In the summary in (22), we employ a compressed version of Keenan and Comrie's (1977) hierarchy as proposed by Hawkins (1999). Hawkins (1999:253, 2004:177) argues that the object of comparison category does not correspond to a single structure type across languages and that it should be eliminated from the hierarchy. He also collapses the indirect object and oblique ranks, ending up with a compressed version of the original hierarchy in Keenan and Comrie (1977): subject > direct object > indirect object/oblique > genitive (William O'Grady p.c.).

- **The Following Tasks**:

  i. To examine Classifier RCs with OSV word order to see whether they behave similarly to Classifier RCs with SOV word order in (22)

  ii. To further examining Classifier-less RCs and update the generalization in (21)

## 5. How are the head nouns derived in Yi?

- Some general tests for movement and base-generations:
  - ♣ Relativization is derived by movement when (i) relativized position is a gap, and (ii) island constraints (Ross 1967) or reconstruction effects (Chomsky 1993) are observed.
  - ♣ Relativization is derived via base-generation (no movement has taken place), if (i) a resumptive pronoun appears, and (ii) island conditions irrelevant and reconstruction effects are absent.

- Movement or base-generation?
  - ♣ Two movement strategies: (1) a promotion strategy that moves the head of the relative construction (e.g. Kayne 1994), and (2) an operator movement strategy (matching analysis) (e.g. Schachter 1973).
  - ♣ A direct base-generation strategy is needed in contexts where movement is not available.

- Island constraints on movement are observed in Yi

(23) **Adjunct Condition (AC) observed**

a. [zo$^{44}$zɯ$^{33}$ a$^{33}$ʤʅ$^{44}$ ma$^{33}$ ko$^{33}$ a$^{31}$ la$^{33}$ ta$^{33}$] nɯ$^{33}$ mu$^{55}$ʤʮ$^{33}$mu$^{55}$.
student DEM Cl there NEG come because 2sg angry
'You were angry because that student didn't come.'

  - ♣ Extract elements from Adjunct Clause is banned:

b. *ŋa$^{33}$ [**zo$^{44}$zɯ$^{33}$**$_i$ [[e$_i$ ko$^{33}$ a$^{31}$ la$^{33}$ ta$^{33}$] nɯ$^{33}$ mu$^{55}$ʤʮ$^{33}$mu$^{55}$] a$^{33}$ʤʅ$^{44}$ ma$^{33}$]
1sg student there NEG come because 2sg angry DEM CL
mo$^{33}$ tɕhi$^{33}$.
want see
Intended: 'I want to see that student whom you were angry with because *[he] would not come.'

  - ♣ With a resumptive pronoun, the above sentence in (23b) becomes grammatical, and island constraints on movement irrelevant:

c. ŋa$^{33}$ [**zo$^{44}$zɯ$^{33}$**$_i$ [[**tshʮ$^{33}$**$_i$ ko$^{33}$ a$^{31}$ la$^{33}$ ta$^{33}$] nɯ$^{33}$ mu$^{55}$ʤʮ$^{33}$mu$^{55}$]
1sg student 3sg--NOM there not come because 2sg angry
a$^{33}$ʤʅ$^{44}$ ma$^{33}$] mo$^{33}$ tɕhi$^{33}$.
DEM CL want see
'I want to see that student whom you were angry with because he would not come.'

♣ The above facts in (23) are **also observed in Mandarin** (Huang 1982; Huang et al 2009: 221, (89))

(24) **Complex NP Condition (CNPC) observed**

a. [tsho$^{33}$ $_{i}$ [si$^{33}$ŋ̩i$^{33}$ a$^{33}$ʤɻ$^{44}$ ma$^{33}$ ko$^{33}$ $_{i}$ he$^{33}$vu$^{33}$] ma$^{33}$] ŋa$^{33}$ sɿ$^{31}$.

person girl DEM CL 3sg-ACC like CL 1sg know

'I know a person whom that girl likes.' [3]

♣ Relativize elements from within the Complex NP is banned:

b. *[**si$^{33}$ŋ̩i$^{33}$$_{j}$** [tsho$^{33}$ $_{i}$ [**e$_{j}$** **ko$^{33}$ $_{i}$** he$^{33}$vu$^{33}$]] ma$^{33}$] ŋa$^{33}$ sɿ$^{31}$ a$^{33}$ʤɻ$^{44}$ ma$^{33}$] bo$^{33}$ o$^{44}$.

girl person 3sg-ACC like CL 1sg know DEM CL leave Asp

'That girl$_{j}$ that I know a person whom e$_{j}$ likes left.'

♣ with resumptive pronouns, the above sentence in (24b) is still not grammatical but is highly improved, and island constraints on movement irrelevant:

c. (?)[**si$^{33}$ŋ̩i$^{33}$$_{j}$** [tsho$^{33}$ $_{i}$ [**tshɲ$^{33}$$_{j}$** **ko$^{33}$ $_{i}$** he$^{33}$vu$^{33}$] ma$^{33}$] ŋa$^{33}$ sɿ$^{31}$ a$^{33}$ʤɻ$^{44}$ ma$^{33}$] bo$^{33}$ o$^{44}$.

girl person 3sg-NOM 3sg-ACC like CL 1sg know Dem CL leave Asp

'That girl$_{j}$ that I know a person whom she$_{j}$ likes left.'

♣ Similarly, the above facts in (24) are **also observed in Mandarin** (Huang 1982; Huang et al 2009: 219, (82a))

- However, in some cases, island conditions can be violated in Yi

(25) **Left Branch Condition (LBC) violation**

a. [si$^{33}$ŋ̩i$^{33}$ a$^{33}$ʤɻ$^{44}$ ma$^{33}$ a$^{44}$ta$^{33}$] ŋa$^{33}$ ɣɯ$^{31}$ mo$^{33}$ o$^{44}$.

girl that Cl father 1sg get see Asp

'I saw that girl's father.'

♣ Unexpectedly, the processor 'girl' in (18a) can be extracted:

b. **si$^{33}$ŋ̩i$^{33}$$_{i}$** [[**e$_{i}$** a$^{44}$ta$^{33}$] ŋa$^{33}$ ɣɯ$^{31}$ mo$^{33}$] a$^{33}$ʤɻ$^{44}$ ma$^{33}$ bo$^{33}$ o$^{44}$.

girl father 1sg get see DEM CL leave Asp

'That girl that I saw [her] father left.'

♣ With resumptive pronouns, the sentence is also acceptable

c. **si$^{33}$ŋ̩i$^{33}$$_{i}$** [[**tshɲ$^{31}$$_{i}$** a$^{44}$ta$^{33}$] ŋa$^{33}$ ɣɯ$^{31}$ mo$^{33}$] a$^{33}$ʤɻ$^{44}$ ma$^{33}$ bo$^{33}$ o$^{44}$.

girl 3sg-GEN father 1sg see DEM CL leave Asp

'That girl that I saw [her] father left.'

→ These examples are similar to the one that we saw in (16b).

[3] In order to express the meaning that 'A person whom that girl likes knows me', the tone on the main verb 'know' needs to change from 31 to 44.

♣ The above facts in (25) **<u>are similar to those in Mandarin</u>** (Huang 1982; Huang et al 2009: 219, (83), (84))

- Yi and Mandarin share similarities in the derivation of head nouns

♣ **<u>Generalization #4</u>**:
Similar to Mandarin, the head noun of RCs in Yi can be derived via movement or base-generation. Some RCs contain a gap and are sensitive to island conditions (AC and CNPC); movement is involved in these cases (e.g. (23b), (24b)). Some RCs are gapless and contain a resumptive pronoun; base-generation rather than movement is involved in these cases (e.g. (23c), (24c), (25c)).

- How to account for the case that violates Island Conditions in (25b)?

♣ <u>Our proposal</u>: it can be explained along the analysis proposed for Mandarin in Huang (1984):
i. Nuosu Yi is a *pro*-drop language (Gerner 2013).
ii. The null category [e] in (25b) may originate as a *pro* that gets coindexed with the relativized NP without movement:

18b. **si$^{33}$ŋ̍i$^{33}$$_{i}$** [[**pro$_{i}$** a$^{44}$ta$^{33}$] ŋa$^{33}$ ɣɯ$^{31}$ mo$^{33}$] a$^{33}$ʤɿ$^{44}$ ma$^{33}$ bo$^{33}$ o$^{44}$.
girl father 1sg get see DEM CL leave Asp
'That girl that I saw [her] father left.'

iii. The sentence in (25b) with apparent island violations (LBC) is grammatical when the relativized NP is base-generated (without movement) and is related to the main clause by coindexing with the closest available *pro* below.
iv. The identification of pro is subject to a minimality requirement, i.e. the *Generalized Control Rule* (GCR):
An empty pronoun is coindexed with the closest nominal. (Huang 1984)

- Implications of the above account:
**i.** Movement is needed for derivation of sentences like those in (9b), (12b), and (14b):

9b. ʑo$^{33}$$_{i}$ [ a$^{44}$mu$^{33}$ t$_{i}$ l̥u$^{55}$ su$^{33}$] ndzạ$^{55}$ dʑɪ$^{33}$ ndzạ$^{55}$.
sheep Amu herd su fat, beautiful very fat, beautiful
'<u>The sheep</u> that Amu herds are very fat.'

12b. [ve$^{44}$ve$^{33}$$_{i}$ [a$^{44}$mu$^{33}$ t$_{i}$ ka$^{33}$ ɕɿ$^{31}$ɬe$^{33}$ a$^{33}$ʤɿ$^{44}$ ma$^{33}$ bɿ$^{44}$]] a$^{33}$ʤɿ$^{44}$ pu$^{33}$
flower Amu AUX girl DEM CL give DEM CL
dʑe$^{55}$-a$^{31}$-gɯ$^{33}$ o$^{44}$.
see$_{<NEG>}$ PERF
'<u>That flower</u> that Amu gave to that girl disappeared.'

14b. [do$^{44}$mu$^{33}$$_{i}$ [a$^{44}$mu$^{33}$ t$_{i}$ si$^{31}$ ʑo$^{33}$ si$^{55}$]] tɕi$^{44}$ su$^{33}$ dʑe$^{55}$ a$^{31}$gɯ$^{33}$ o$^{44}$.
<u>knife</u> Amu INSTR sheep kill CL the see$_{<NEG>}$ PERF
'<u>The knife</u> with which Amu kills sheep disappeared.'

**ii.** Base-generation is needed for derivation of sentences like those in (10c), (11b), (13b),

(15b), and (17b) which contain a resumptive pronoun.[4]

**iii.** Both Movement and Base-generation are possible for derivation of sentences like those in (7b) and (10d):

7b. [**su$^{33}$l̥i$^{55}$$_i$** [**t$_i$/pro$_i$** mu$^{33}$ dzɿ$^{33}$ta$^{33}$ la$^{33}$]] ma$^{44}$ su$^{33}$ kha$^{55}$ bo$^{33}$ o$^{44}$?
boy horse ride Adv$_{manner}$ come CL the where go PERF
'Where did <u>the boy</u> who came riding on a horse go?

10d. [**ɕɿ$^{31}$ɬe$^{33}$$_i$** [**t$_i$/pro$_i$** a$^{44}$mu$^{33}$ he$^{33}$vu$^{33}$]] a$^{33}$dzɿ$^{44}$ ma$^{33}$ bo$^{33}$ o$^{44}$.
girl Amu like DEM CL go PERF
'<u>That girl</u> who likes Amu left.'

- <u>A follow-up question</u>: what is the function of resumptive pronoun in Yi?

- Some preliminary thoughts:
  i. Similar to many other languages, resumptive pronouns Yi can serve to improve acceptability/to help sentence processing (e.g. (22d), (23c), (24c))
  ii. Differing from many languages, presumptive pronouns in Yi can also serve to mark the syntactic position of the relativizated NP (i.e. non sentence-initial position), providing clue for the themantic role of the relativzed NP, when there is no linguistic clue nor world-knowledge clue are available (based on (21) and (22c)).
  --Unlike Mandarin, the syntactic position of which is expressed via visible word order, i.e. pre-verbal position or post-verbal position, or Japanese, which has overt case marking on nouns (e.g. Nom versus Acc), Yi lacks these visible means to mark syntactic positions (no overt case marking; both subject and object are in the pre-verbal position) when relativization is involved.
  --The resumptive pronoun is a strategy that Yi resorts to for marking the syntactic position of the relativized NP and provide information on the themantic role of the relativized NP.

- Other Questions:
  i. Why are Mandarin and Yi subject to this constraint, i.e. GCR?
  ii. Is GCR a language-specific rule or a general principle?

## 6. What is the structure of Yi RCs?

- Two structures have been proposed for RCs

  i. Adjunction structure: the relative clause is adjoined to the Head (e.g. Chomsky 1977)
  ii. Complementation structure: the relative clause is a complement to D (e.g. Kayne 1994)

- Regarding Mandarin RCs,
  i. Simpson (2002) proposed a complementation structure for Mandarin RCs, but
  ii. Aoun and Li (2003) and Del Gobbo (2003) argue that Mandarin RCs should be analyzed as adjunction.

[4] It remains unexplained as to why resumptive pronouns are needed in these cases.

- Regarding Yi RCs, both complementation and adjunction seem to be possible.

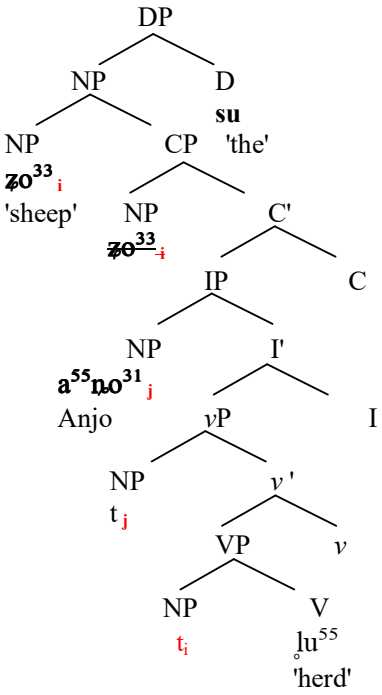
  ♣ Recall the two types of RCs in Yi:
  i. RCs without classifiers
  ii. RCs with classifiers

  ♣ Below, I explore both structures for the two types of RCs:

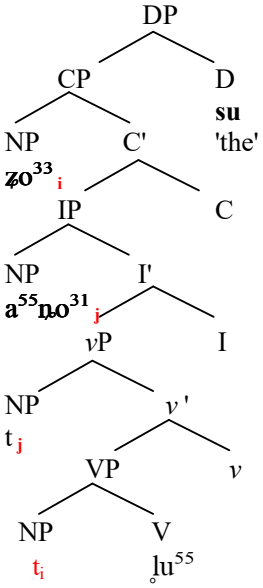
(26) **Type 1: Classifier-less RCs**

a. ʑo$^{33}$ $_{i}$ [a$^{55}$ȵo$^{31}$ t$_{i}$ l̥u$^{55}$ **su$^{33}$**] ndzɑ̱$^{55}$ dʑi$^{33}$ ndzɑ̱$^{55}$.
sheep Anjo herd SU fat, beautiful very fat, beautiful
'The sheep that Mary herds <u>is/are</u> very fat.'

b. Apply Adjunction Structure to Yi




c. Apply Complementation Structure to Yi

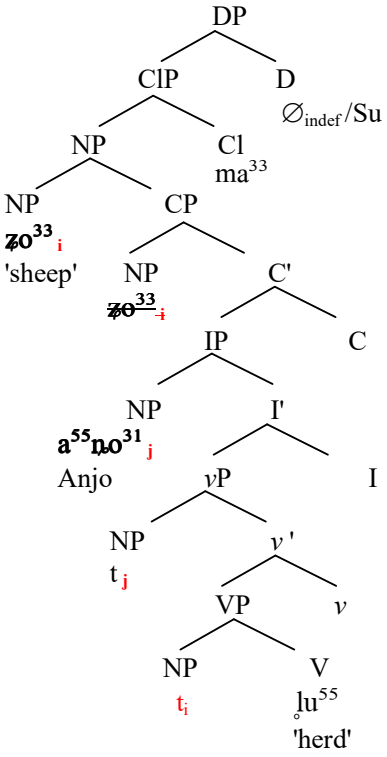


(27) **Type 2: Classifier RCs**

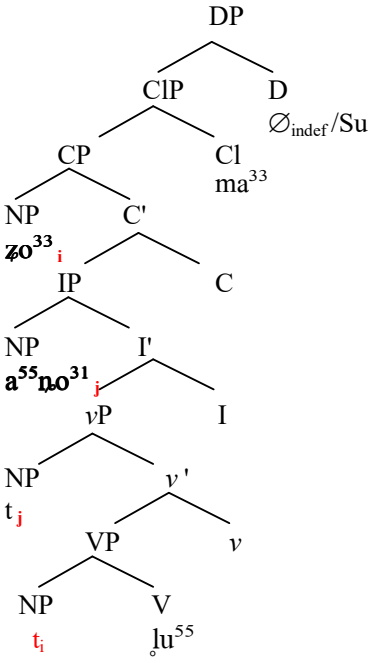
a. ʑo$^{33}$ $_{i}$ [a$^{55}$ȵo$^{31}$ t$_{i}$ l̥u$^{55}$ **ma$^{33}$**] ndzɻa$^{55}$ dʑɪ$^{33}$ ndzɻa$^{55}$.
sheep Anjo herd Cl fat, beautiful very fat, beautiful
'A sheep that Mary herds is very fat.'

b. ʑo$^{33}$ $_{i}$ [a$^{55}$ȵo$^{31}$ t$_{i}$ l̥u$^{55}$ **ma$^{33}$su$^{33}$**] ndzɻa$^{55}$ dʑɪ$^{33}$ ndzɻa$^{55}$.
sheep Anjo herd Cl Su fat, beautiful very fat, beautiful
'The sheep that Mary herds is very fat.'

c. Apply Adjunction Structure to Yi




c. Apply Complementation Structure to Yi



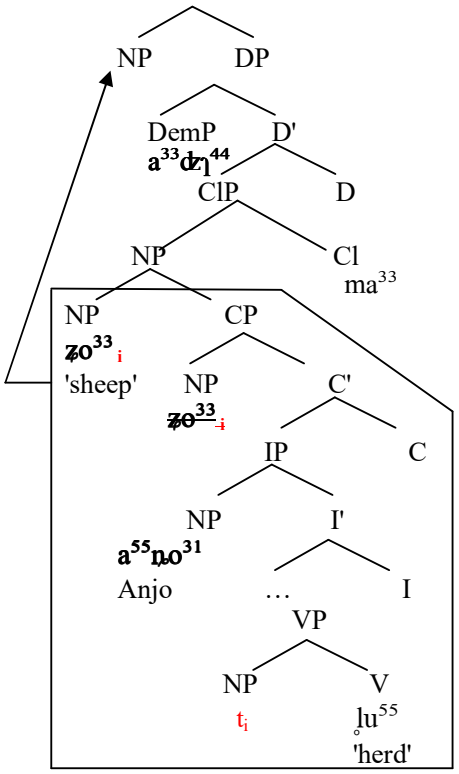
(28) **Type 2: Classifier RCs with demonstratives**

a. ʑo$^{33}$ $_{i}$ [a$^{55}$ȵo$^{31}$ t$_{i}$ l̥u$^{55}$ **a$^{33}$ʤɿ$^{44}$ ma$^{33}$**] ndzɻa$^{55}$ ʤɿ$^{33}$ ndzɻa$^{55}$.

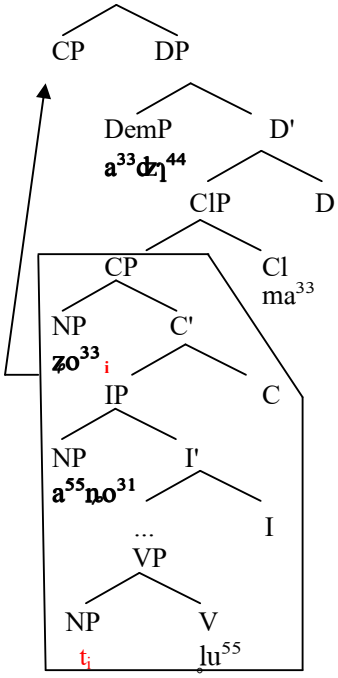
sheep Anjo herd Dem Cl fat, beautiful very fat, beautiful

'That sheep that Mary herds is very fat.'

b. Apply Adjunction Structure to Yi




c. Apply Complementation Structure to Yi



- In the structures in (28b, c), I adopt the view that demonstratives occur in specifier position rather than in the D position (Giusti 1997, 2002; Brugé 2000, 2002; Alexiadou et al 2007, a.o.).
- I further assume that the relativized NP moves to the initial position of the phrase. The movement to the initial position of the phrase in (28b, c) draws on Simpson (2005), where such movement is used to explain cross-linguistic variation in the ordering of constituents in the classifier phrases in South East Asian Languages (Simpson 2005: 309-323).

- The following tasks:
  i. To provide arguments for or against the Adjunction Structure and Complementation Structure proposed above

  ii. To explain what the function of the classifier in Classifier RCs is (e.g. (27) and (28)).
  (1) it fuctions as relativizer?
  (2) it indicates referential properties and number information?

  iii. To understand the semantics of the two types of RCs in Yi.

## 7. Summary

1. Two main types of RCs in Yi: (i). Classifier-less RCs, and (ii). Classifier RCs. Mandarin only has one type: the *de*-RCs, which is superficially similar to the Classifier-less RCs.

2. **Generalization #1**: Yi can relativize elements in all of the positions in Noun Phrase Accessibility Hierarchy (NPAH) proposed in Keenan and Comrie (1977): Subj > DO > IO > OBl > Gen > OComp.

3. **Generalization #2**: The semantic roles that the relativzed NPs in Yi can bear include Agent, Patient, Recipient, Experiencer, Theme, Instrument, Location and Time.

4. **Generalization #3**: The relativization strategies (gap or resumptive prnouns) that Classifier RCs with SOV word order in Yi employ depend on two factors: (i) the position of relativized NP, i.e. subject or non-subject, and (ii) whether there is a clue (linguistic clue such, as s-selection of the predicates, or world-knowledge clue) to determine the themantic roles of the relativized NP (e.g. Agent, Patient, Experiencer, Theme, etc)

5. As for the Classifier-less *su*-RCs, according to Gerner (2013), whether they employ a gap or a resumptive strategy depends on the word order of the relative clause (SOV or OSV); however counterexamples are observed, and further examination of this type of RCs is required.

6. **Generalization #4**: Similar to Mandarin, the head noun of RCs in Yi can be derived via movement or base-generation.

7. Unlike Mandarin Chinese, both a adjunction construction and a complementation construction seem to be possible for Yi RCs.

8. Many issues remain unknown and require further examinations (e.g. do Classifier RCs with OSV word order employ the same relativization strategies as those with SOV word order? what's the function of classifiers in Yi RCs?); however, studying more about Yi RCs can help us better understand micro-variation within the same language family, which is crucial for us to understand macro-variation and universals.

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