Patterns of relativization in Austronesian and Tibetan

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1 Introduction

Today I discuss the grammars of “Philippine-type” Austronesian languages — illustrated here with Tagalog — and Tibetan and highlight one striking similarity (at least on the surface):

► Both languages/groups use verbal affixes to mark the choice of relative clause pivot.

(1) Agent and theme relatives in Tagalog:
   a. bata=ng [b<um>ili ng tela]  
      child=LK <PRF.AV>buy GEN cloth  
      ‘child who bought cloth’
   b. tela=ng [b<in>ili-∅ ng bata]  
      cloth=LK <PRF>PV buy GEN child  
      ‘cloth that the child bought’

(2) Agent and theme relatives in Tibetan:
   a. [deb ‘bri-mkhan] mi  
      book write-MKHAN person  
      ‘person(s) who wrote/writes book(s)’
   b. [pad.ma-s ‘bri-pa]-i dep  
      Pema-ERG write-PA-GEN book  
      ‘book(s) that Pema wrote’

Each language/group is known for having a rich inventory of such affixes:

(3) Verbal morphology on relativized verbs, by choice of pivot:
   a. Tagalog: (perfective)  
      <um> agents  
      -an locatives/goals  
      -i- instruments/beneficiaries  
      -∅ themes
   b. Tibetan: (perfective)  
      -mkhan མཁན་ agents  
      -sa ལ་ locatives/goals  
      -yag ཡག་ instruments  
      -pa ལ་ themes

However, the parallels between these systems have not been investigated before, as these patterns have been described under very different banners:

• for Philippine-type languages, as part of these languages’ voice systems (see e.g. Keenan and Comrie, 1977; Kroeger, 1991/1993; Guilloyle, Hung, and Travis, 1992; Richards, 2000; Aldridge, 2002, 2004; Rackowski and Richards, 2005; Erlewine, Levin, and Van Urk, 2017));
• for Tibetan and other Tibeto-Burman languages, as nominalizations (see e.g. Matisoff, 1972; Herring, 1991; Noonan, 1997; Bickel, 1999; DeLancey, 2002; Noonan, 2008; Genetti et al., 2008; Genetti, 2011; DeLancey, 2011).

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1“Philippine-type” refers to a particular class of Austronesian languages with shared grammatical characteristics; see e.g. Wolff, 1993; Himmelmann, 2002, 2005; Blust, 2010, 2013; Erlewine and Levin to appear. They comprise the Austronesian languages of the Philippines, most of Taiwan, northern Borneo and Sulawesi, and Madagascar.
These patterns continue to exhibit striking parallels when we consider the behavior of long-distance relativization, previously undescribed in Tibetan.

- Such data challenge the analysis of Tibetan relativization as built exclusively on nominalizations (DeLancey, 1999, 2002; Noonan, 2008).
- We can productively understand the similarities between such verbal morphology in Philippine-type languages and Tibetan — as well as their differences — in a familiar way.

**Roadmap**

§2 Philippine-type languages  §3 Tibetan  §4 Synthesis and discussion

## 2 Philippine-type languages

### 2.1 Austronesian voice systems and the “subject-only” restriction

The morphological alternation observed in Tagalog relative clauses above reflects a more general alternation between different clause types:

\[(4) \text{Tagalog voice alternation: (Rackowski and Richards, 2005: 566)}\]

a. B<um>ili ang bata ng tela sa palengke para sa nanay.  
   <PRF.AV>buy ANG child GEN cloth DAT market for DAT mother  
   ‘The child bought cloth at the market for mother.’  
   Actor Voice (AV)  

b. B<in>ili-∅ ng bata ang tela sa palengke para sa nanay.  
   <PRF>PV GEN child ANG cloth DAT market for DAT mother  
   ‘The child bought the cloth at the market for mother.’  
   Patient Voice (PV)  

c. B<in>ilh-an ng bata ng tela ang palengke para sa nanay.  
   <PRF>PV GEN child GEN cloth ANG market for DAT mother  
   ‘The child bought (the) cloth at the market for mother.’  
   Locative Voice (LV)  

d. I-b<in>ili ng bata ng tela sa palengke ang nanay.  
   BV-<PRF>buy GEN child GEN cloth DAT market ANG mother  
   ‘The child bought (the) cloth at the market for mother.’  
   Ben./Instr. Voice (BV/IV)

- Every verb has one of these “voice” markers, not just in relative clauses.
  - The choice of voice marker correlates with the choice of ang-marked argument (I), which I call the “subject” today. We can think of ang as nominative (or, for some authors, absolutive) case, which appears to override an underlying case marker. But there is significant debate on these points.\(^3\)
  - Keenan and Comrie (1977): These languages have a “subject-only” A-extraction restriction. This explains the correlation between verbal morphology and the choice of pivot in relative clauses, as in (I) above.

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\(^2\)Abbreviations: GEN = genitive, DAT = dative; PRF = perfective, ASP = other aspect.

\(^3\)See Aldridge (2004) and references there for the analysis of these languages as ergative, and see also Erlewine, Levin, and Van Urk (2017) and Chen (2017) for recent critical discussion of this approach.

\(^4\)There is even debate over basic terminology: some call the subject “pivot,” “focus,” “topic,” or “trigger.”
2.2 Long-distance relativization

Clause-embedding verbs such as ‘say’ also participate in voice alternations.

(5) Voice alternation of clause-embedding verb: (based on Rackowski and Richards, 2005: 586)
   a. Nag-sabi ang kalabaw [na masarap ang bulaklak].
      \textit{PRF.AV-say ANG water.buffalo that delicious ANG flower}
      ‘The water buffalo said [that the flower is delicious].’
   b. S<in>-abi-∅∅∅ ng kalabaw [na masarap ang bulaklak].
      <PRF>say-PV GEN water.buffalo that delicious ANG flower
      ‘The water buffalo said [that the flower is delicious].’

Although the embedded clauses in (5) are uniformly introduced with \textit{na ‘that,’} never \textit{ang}, we hypothesize that it is the grammatical “subject” in (5b).

Now consider relativization over an embedded clause argument — “long-distance” relativization:

(6) Long-distance (LD) relativization of an embedded goal: (based on ibid.: 586)

   kalabaw [na \textit{\{} *nag-sabi ang guro \textit{\}} \textit{\}} [na bi-bigy-an ng lalaki ng bulaklak \textit{]}]
   w.b. that \textit{\{} ‘s<in>abi-∅∅∅ ng guro \textit{\}} that ASP-give-LV GEN man GEN flower
   ‘water buffalo [that the teacher said [that the man would give a flower to \textit{]}]’

   ► The relative clause pivot must be the “subject” of the embedded clause. In addition, \textbf{the embedded clause itself must be the “subject” of the higher, embedding verb}, as determined by the choice of voice morphology.$^5$

This same basic description for LD relativization holds of other Philippine-type languages such as Bikol \cite{erlewine2019} as well as other, non-Philippine-type Austronesian languages such as Madurese \cite{davies2003}, as well as the Nilotic language Dinka \cite{vanurk2015}, which has been shown to also exhibit an Austronesian-type voice system \cite{erlewine2015,erlewine2017}.

2.3 Summary

1. Relative clauses in Philippine-type Austronesian languages reflect the choice of pivot because of (a) their rich inventory of “voices,” including options for some oblique arguments to be “subject,” together with (b) a “subject-only” restriction on relativization.

2. In LD relativization, the embedded clause is required to be the higher verb’s “subject”; i.e. the subject-only restriction holds for each verb in a complex chain of relativization.

$^5$‘Say’ must be in PV in (F) to support long-distance relativization. Other verbs use different voices to make the embedded clause the “subject,” e.g. LV for ‘believe.’
3 Tibetan

3.1 Relativization as nominalization

Verbs in Tibetan end with a series of auxiliaries (aux) encoding tense/aspect/evidential values (Tournadre and Jiato, 2001; Vokurková, 2008). Relativization involves a distinct verb form where the auxiliaries are replaced by a “nominalizer” ending.

(7) བཀྲ་ཤིས་ཀྱིས་དེབ་འབྲི་གི་དུག
bkra.shis-kyis deb ’bri-gi.dug. → [RC deb ’bri-mkhan] mi
tashi-erg book write-aux
‘Tashi is writing a book.’

(8) དེབ་འབྲི་མཁན། མི་
deb book ’bri-mkhan mi
person
‘person who wrote/writes/is writing a book/books’

Relativization in Tibeto-Burman languages has been studied almost exclusively under the umbrella of nominalization, a major topic of study in Tibeto-Burman linguistics.

(9) -pa event nominalization: (Tournadre and Sangda Dorje, 2003: 282)

[[bod.skad shes-pa] de] gal chen.po red.
Tibetan language know-pa dem importance great cop.aux
‘Knowing Tibetan is very important.’

From this perspective, relative clauses simply represent another use of nominalizations, as verbal argument nominalizations.

(10) -pa theme nominalization: (11) -pa object relative:

pad.ma-s bzos-pa de [pad.ma-s bzos-pa]-i mog.mog de
Pema-erg make-pa dem Pema-erg make-pa-gen momo dem
‘what Pema made’ ‘the momo that Pema made’ -pa.’i > -pe

Noonan 2008 “in adnominal modification... at least in Bodic, they are probably best viewed as NPs juxtaposed to the NPs they are modifying, the two NPs constituting, therefore, a sort of appositional structure”

(12) Relativization = argument nominalization modifier + NP:

argument nominalization, (=gen) + NP, (based on Noonan, 1997: 383)

The genitive marker is strongly preferred for all pre-nominal relatives, except for subject relatives with -mkhan (DeLancey, 1999).

Semantically, we could cash out this intuition with intersective modificational semantics:

(13) [I (12)] = [argument nominalization] ∩ [NP]

I employ the common Wylie transliteration for Tibetan orthography here, with periods indicating syllable boundaries where there is no morpheme boundary. erg = ergative, dem = demonstrative, pl = plural.

Despite DeLancey’s claim, some of my speakers volunteered pre-nominal subject relatives with -mkhan followed by a genitive. Similar data with -mkhan-gen is found in Seth Cable’s field notes (via p.c.) from another speaker.
3.2 The “nominalizers”

(14) “Nominalizers” by choice of pivot: expanding on (38)

-\textit{\textbf{\textit{mkhan}}} \text{\textbf{\textit{ agents/subjects}}} \\
-\textit{\textbf{\textit{sa}}} \text{\textbf{\textit{ locatives/goals}}} \\
-\textit{\textbf{\textit{yag}}} \text{\textbf{\textit{ instruments and imperfective themes}}} \\
-\textit{\textbf{\textit{pa}}} \text{\textbf{\textit{ perfective themes}}} \\


- There is an interaction with aspect for theme relativization, which will be relevant later.

(15) \textit{\textbf{\textit{sa}}} locative relative:

\begin{verbalizable}{RC}{pad.ma-s \text{\textit{mog.mog bzo-sa}}-i \text{\textit{sa.cha de}}\text{\textit{\textit{\textit{the place that Pema made/makes dumplings’}}}}\text{\textit{\textit{\textit{-sa.’i > -se}}}}

\textit{\textbf{\textit{sa}}} reflects a gap with e.g. dative/locative (-\textit{\textit{la}}) or elative (-\textit{\textit{nas}}) case. (See \cite{Hill2012}.)

(16) \textit{\textbf{\textit{yag}}} instrumental relative:

\begin{verbalizable}{RC}{pad.ma-s \text{\textit{mog.mog bzo-yag}}-i \text{\textit{mog.zangs de}}\text{\textit{\textit{the steamer that Pema made/makes dumplings with’}}\text{\textit{\textit{\textit{-yag.’i > -ye}}}}

\textit{\textbf{\textit{yag}}} reflects an instrumental (-\textit{\textit{gis/kyis/gyis/s}}, homophonous with ergative) gap, or imperfective theme gap.

There are various reasons to suspect that \textit{\textbf{\textit{pa}}} somehow differs from the other suffixes:

1. Classical Tibetan used only \textit{\textbf{\textit{pa}}}. Cognates of \textit{\textbf{\textit{pa}}} are found across the Tibeto-Burman family \cite{DeLancey2002, Noonan2008}. Non-\textit{\textbf{\textit{pa}}} endings originated as various nominal endings, with their function later extended to productive relative clauses \cite{DeLancey2002}:

- In Classical Tibetan, \textit{\textbf{\textit{\textit{mkhan}}} had only one use, as a derivational suffix for trades: \textit{\textbf{\textit{shing-mkhan}}} \text{\textit{wood-MKHAN ‘carpenter’}}
- The locative nominalizer \textit{sa} derives from the root \textit{sa} ‘place.’

2. \cite{DeLancey1999} 234: \textit{\textbf{\textit{pa}}} is “unstressed and subject to drastic phonological reduction… the other three show compound phonology; this is consistent with their derivational origin.”

3. For verbs with distinct perfective and imperfective stems, \textit{\textbf{\textit{pa}}} takes the perfective stem while all others take the imperfective stem: e.g. ‘make’ = \textit{\textbf{\textit{PRF bsos- /s0/; IMPF bso- /s0/}}}.  

\textsuperscript{8}As \cite{DeLancey1999} 239–242 notes, the use of \textit{\textbf{\textit{mkhan}}} roughly correlates with the gap being an ergative (-\textit{\textit{gis/kyis/gyis/s}}) case position, but \textit{\textbf{\textit{mkhan}}} is also used for relativization over possessor subjects of verbs of possession, which are dative (-\textit{\textit{la}}).
3.3 Long-distance relativization

- We now consider “long-distance” (LD) relativization in Tibetan. No previous work has described LD relatives in Tibetan — nor, to my knowledge, in any other Bodic language.

- All data comes from my fieldwork conducted in Dharamsala, India in summers 2018 and 2019, and reflect the judgments of nine speakers.

(17) Embedded clause under ‘say’:

\[
\text{bkra.shis-kyis [pad.ma-s mog.mog bzos-song] lap-song.}
\]

Tashi-ERG Pema-ERG dumpling make-AUX say-AUX

‘Tashi said [that Pema made dumplings].’

LD theme relatives

(18) \[
[\text{RC bkra.shis-kyis [pad.ma-s} \quad \text{bzos-}^{*}\text{pa/song}] \quad \text{lap-}^{*}\text{pa/song}]-^{*}\text{i} \quad \text{mog.mog} \quad \text{de-tso} \\
\quad \text{Tashi-ERG} \quad \text{Pema-ERG} \quad \text{make-}^{*}\text{pa/AUX} \quad \text{say-}^{*}\text{pa/AUX-GEN} \quad \text{momo} \quad \text{DEM-PL}
\]

‘those momo [that Tashi said [that Pema made ___]].’

- \text{-pa only goes on the higher verb of the relative clause.} The embedded clause with a gap is a regular, finite clause.

LD subject relatives

(19) \[
[\text{RC bkra.shis-kyis [} \quad \text{mog.mog} \quad \text{bzo-}^{*}\text{mkhan/song}] \quad \text{lap-}^{*}\text{mkhan}]-^{*}\text{i} \quad \text{mi} \quad \text{de} \\
\quad \text{Tashi-ERG} \quad \text{momo} \quad \text{make-mkhan/AUX} \quad \text{say-pa/mkhan-GEN} \quad \text{person} \quad \text{DEM}
\]

‘the person [that Tashi said [made/makes momo]].’

- For LD subject relatives, there is \text{subject relativization marking -mkhan on the embedded verb, then -pa on the higher clause}.

LD locative relatives

(20) \[
[\text{RC bkra.shis-kyis [pad.ma-s} \quad \text{mog.mog} \quad \text{bzo-sa/song}] \quad \text{lap-}^{*}\text{sa}]\quad \text{-i} \quad \text{sa.cha} \quad \text{de} \\
\quad \text{Tashi-ERG} \quad \text{Pema-ERG} \quad \text{momo} \quad \text{make-sa/AUX} \quad \text{say-pa/sa-GEN} \quad \text{place} \quad \text{DEM}
\]

‘the place [that Tashi said [Pema made/makes momo ___]].’

\footnote{Most were born in Tibet and moved to India earlier in life; others were born in India. All grew up speaking Tibetan as their first language and attended Tibetan language medium schools. I especially thank Kunga Choedon, Pema Yonden, and Yepo.}
LD instrumental relatives

(21) བཀྲ་ཤིས་ཀྱིས་ལཔ་པའི་མོ་ོ་བཟ ོ ་[rc bkra.shis-kyis [pad.ma-s _ mog.mog bzo-yag/*song] lap-pa/*yag]-’i _ mog.zangs de
    Tashi-ERG Pema-ERG momo make-yag/*aux say-pa/*yag-gen steamer dem
    ’the steeiner [that Tashi said [Pema made/makes momo with ___]]’

Interim summary and analysis

-pa fundamentally differs in syntactic function from the other “nominalizers.”

► -pa marks the edge of entire relative clauses (to be revised), whereas the other markers reflect a particular kind of local gap.
• -pa and the other “nominalizers” cannot cooccur on the same verb, e.g. *bso-sa-pa. In local (non-LD) relatives with a marked (subject/locative/instrument) gap, the marked, non-pa “nominalizer” (-mkhan/so/yag) wins out.

3.4 Another word order and the nature of -pa

Long-distance relativization can also take another form:

(22) Another LD subject relative:
    བཀྲ་ཤིས་ཀྱིས་ལཔ་པའི་зор་ས་པའི་མོ་ོ་བཟ ་[rc bkra.shis-kyis __ lap-pa]-’i __ [mog.mog bzo-mkhan] mi de
    Tashi-ERG say-pa-gen momo make-mkhan person dem
    ’the person [that Tashi said [made/makes momos]]’ = ([19])

This word order appears to involve optional movement of the embedded clause; cf ([19]).

► The semantics of (22) forms an argument against each V-“nominalizer” being a pre-built argument nominalization which intersectively modifies the NP:

[[(22)] = [the person that Tashi said made/makes momos]
    ≠ the([what Tashi said] ∩ [who made/makes momos] ∩ [person])

Now consider this word order variant for LD object relativization:

(23) Another LD object relative:
    བཀྲ་ཤིས་ཀྱིས་ལཔ་པའི་མོ་ོ་བཟ ་[rc bkra.shis-kyis __ lap-pa]-’i __ [pad.ma-s bzos-pa]-’i mog.mog de-tso
    Tashi-ERG say-pa-gen Pema-ERG make-pa-gen momo dem-pl
    ’those momo [that Tashi said [that Pema made ___]]’ = ([18])

► Now both clauses get -pa marking! Cf ([18])
It then cannot be that -pa marks the highest verb / edge of the entire relative clause.

- The contrast between (23) and (18) above teaches us that each -pa corresponds to its own step of movement, with the optional movement of an embedded clause counting as a separate step from the movement of the head itself.

On the position of embedded clauses

(24) Embedded clauses generally cannot be postposed:

* bkra.shis-kyis lap-song, [pad.ma-s mog.mog bzos-song].

Tashi-ERG say-AUX Pema-ERG dumpling make-AUX

Intended: ‘Tashi said [that Pema made dumplings].’ = (17)

- The placement of the embedded clause after the higher verb (‘say’ in (22–23)) is specifically made possible in LD relativization.

On the choice of “nominalizer” suffixes

- We’ve concluded that (a) -mkhan/sa/yag indicate a marked local gap, and (b) -pa marks the final position of an unmarked movement, including all relative clause edges.

(25) LD agent relative, with higher -yag:

* bkra.shis-kyis bsam-yag]-‘i [__ mog.mog bzo-mkhan] mi de

Tashi-ERG think-yag-GEN dumpling make-MKHAN person DEM

‘the person [that Tashi thinks [___ made/makes dumplings]]’

- -yag appears in (25) because the higher verb ‘think’ is imperfective; cf (22).

- Recall that theme relatives with perfective descriptions involve -pa; with imperfective descriptions involve -yag.

- The choice of -pa/yag on ‘say/think’ behaves as if we are relativizing over the theme of the higher verb, ‘say/think’! Relativizing morphology responds locally for each step of movement along the way.

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10 See e.g. [Georgi 2017] for discussion of extraction marking morphology which distinguishes final vs intermediate steps of movement.
4 Synthesis and discussion

Both Philippine-type Austronesian languages and Tibetan utilize verbal morphology to distinguish relative clauses with different pivots.

- At first glance, it appears that this parallel may be only superficial, and due to two very different mechanisms:
  - Philippine-type languages have a “subject-only” restriction on A-extraction, together with multiple “voices” to make different arguments the “subject.”
  - Tibetan relative clause forms are distinct from regular finite verbs.

However, the behavior of LD relativization in Philippine-type languages and Tibetan make these systems look even more similar:

In LD relativization, each verb reflects the thematic role of its local pivot gap or the embedded clause containing the pivot gap.

This description applies to both Philippine-type languages and Tibetan, if we limit our attention to Tibetan LD relatives with displaced embedded clauses, as in §3.4 rather than in §3.3.

An alternative approach to Austronesian voice systems allows for an even clearer unification:

- Voice systems in Philippine-type languages are often described as argument structure alternations (e.g. Guilfoyle, Hung, and Travis, 1992; Aldridge, 2004, 2008; Legate, 2012):
  - The choice of voice determines the choice of “subject.”
  - Only the subject can be relativized (Keenan and Comrie, 1977).

- But there’s another approach to voice systems on the market (see e.g. Chung, 1994; Richards, 2000; Pearson, 2001, 2005; Chen, 2017; Erlewine, Levin, and Van Urk, 2017, in prep.):

  A Philippine-type voice morphemes are responses to extraction (e.g. relativization) of a particular type of argument;

  B Every clause is required to choose one nominal to participate in extraction or a similar process, feeding A.

We can relate B to the “prefield” requirement in Germanic V2:

(26) Swedish V2 alternation:

  a. Han känner __ faktiskt Ingrid.
     he knows actually Ingrid
     ‘He actually knows Ingrid.’
  b. Ingrid känner han faktiskt __.
     Ingrid knows he actually
     ‘He actually knows Ingrid.’
- A single argument in each clause — by default, a *topic* — is chosen and...

(a) in Germanic V2: moves to clause-initial position;
(b) in Philippine-type languages: receives a particular marker/case (Tagalog *ang*);
(c) in Dinka (Nilotic; Erlewine, Levin, and Van Urk 2015, 2017, in prep.):
    moves to clause-initial position and receives a particular case.

- But *A*-extraction such as relativization or *wh*-movement proceeds through the *B*←-position/process, blocking movement of a topic to initial position:

(27) **Topicalization disallowed within Swedish relative clauses:**

a. *den flicka ([RC som har kammat sitt hår] the girl that has combed her hair

b. *den flicka ([RC som sitt hår har kammat ___] the girl that her hair has combed (Franco, 2012: 326)

In Philippine-type languages, assuming that the assignment of *ang* and *A*-extraction underlyingly involve (effectively¹¹) the same process (Chen 2017; Erlewine, Levin, and Van Urk 2017, in prep.), and both feed *B*, we derive the apparent “subject-only” extraction restriction.

► **Tibetan relativization suffixes are responses to extraction** of a particular type of argument — just like in Philippine-type languages *B* — but Tibetan has no requirement for some argument to participate in such a process — unlike Philippine-type languages *B*.

- These verb forms in Tibetan thus appear only in relativization, not in regular clauses.
  — and for *-pa*, only when it is marks the position of a final movement.
- This “response” mechanism *A* applies per clause, unifying the behavior of LD relatives in Tibetan and Philippine-type languages.

**References**


¹¹For example, for Erlewine and Lim 2019, nominative is assigned by T and *A*-extraction involves C, but both necessarily target the same argument.


