Long-distance relativization in Tibetan

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Relativization in Tibetan involves a process of “nominalization,” resulting in a verb form with a “nominalizer” ending (-mkhan in (2)).

(1) ཆོས་ཤིས་ཀྱིས་དེབ་འབྲི་གི་དུག

bkra.shis-kyis deb ‘bri-gi.dug.
Tashi-ERG book write-AUX

‘Tashi is writing a book.’

(2) དེབ་འབྲི་མཁན་མི

[[RC deb ‘bri-mkhan] mi
book write-MKHan person

‘person who wrote/writes/is writing a book/books’

These “nominalizations” lack the auxiliaries of finite verbal complexes (1).
Relativization in Tibetan involves a process of “nominalization,” resulting in a verb form with a “nominalizer” ending (-mkhan in (2)).

(1) བཀྲ་ཤིས་ཀྱིས་དེབ་འབྲི་གི་དུག
bkra.shis-kyis deb ’bri-gi.dug. → [[RC deb ’bri-mkhan] mi]
Tashi-ERG book write-AUX book write-MKHAN person
‘Tashi is writing a book.’

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

These “nominalizations” lack the auxiliaries of finite verbal complexes (1).

(3) **Nominalizers by choice of pivot:**

- *mkhan* མཁན་ transitive subjects
- *sa* ས་ locative arguments
- *yag* ཡག་ instrumental arguments and imperfective objects
- *pa* མ་ perfective objects
• I describe strategies for **long-distance relativization** in Tibetan, which informs the analysis of the “nominalizer” morphemes.

  • *-pa fundamentally differs in function from the other “nominalizers” in (roughly) marking the edge of the relative clause, whereas *-mkhan/-sa/-yag reflects the presence of a marked, local gap.

  • Verbs with “nominalizer” endings are in fact, in some sense, full finite clauses.
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  • *-pa* fundamentally differs in function from the other “nominalizers” in (roughly) marking the edge of the relative clause, whereas *-mkhan/-sa/-yag* reflects the presence of a marked, local gap.
  
  • Verbs with “nominalizer” endings are in fact, in some sense, full finite clauses.
• I present a proof-of-concept analysis for \(-mkhan/-sa/-yag\) as reflecting 
  marked derivations which bleed nominal licensing.
  • This explains a restriction on head-internal relatives.

• Relativization in Tibetan cannot synchronically be reduced to 
  nominalization.
Today

- I present a proof-of-concept analysis for -mkhan/-sa/-yag as reflecting marked derivations which bleed nominal licensing.
  - This explains a restriction on head-internal relatives.
- Relativization in Tibetan cannot synchronically be reduced to nominalization.
§1 Background
§2 New data
§3 Analysis
§4 A bit more new data
§5 Lessons
§1 Background
Tibetan is SOV with scrambling. The case marker -gis/kyis/gyis/s is glossed as ERG, but its distribution is more complex; see e.g. DeLancey 2011, Famularo et al. 2015. Objects are always unmarked (“absolutive”).

(4) བཀྲ་ཤིས་ཀྱིས་མོ་ོ་ཀྲོ་དོ་བཟས་སོ།

bkra.shis-(kyis) mog.mog bzas-song.

Tashi-ERG momo eat-AUX

‘Tashi ate momo (dumplings).’

(5) བཀྲ་ཤིས་ཉལ་བསྡད་བཞག།

bkra.shis-(*kyis) nyal-bsdad-bzhag.

Tashi-(*ERG) sleep-stay-AUX

‘Tashi is sleeping.’

Auxiliaries in the verbal complex — grouped together as AUX here — together express tense/aspect/modal/evidential specifications (Tournadre and Jiatso 2001, Vokurková 2008).
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Auxiliaries in the verbal complex — grouped together as aux here — together express tense/aspect/modal/evidential specifications (Tournadre and Jiatso 2001, Vokurková 2008).
Relativization in Tibeto-Burman languages has been studied almost exclusively under the umbrella of *nominalization*, a major topic of study in Tibeto-Burman linguistics.

(6) **-pa event nominalization:**  


\[
\text{[[bod.skad shes-pa] de] gal chen.po red.}
\]

Tibetan language know-PA DEM importance great COP.AUX

‘Knowing Tibetan is very important.’
From this perspective, nominalizations as in (7) simply represent another use of these nominalizations, as *verbal argument nominalizations*.

(7) **-pa nominalization as patient nominal:**

\[ \text{pad.ma-s bzos-} \text{pa de} \]

Pema-ERG make-PA DEM

‘what Pema made’
DeLancey 1999:231: “In Tibetan, relativization is simply one function of nominalization, that is, *relative clauses are simply dependent or appositive NPs.*”

(8) \[
\text{Relativization} = \text{argument nominalization modifier} + \text{NP}:
\]
\[
\text{argument nominalization}_i (=\text{GEN}) + \text{NP}_i \quad \text{(based on Noonan 1997:383)}
\]

(9) \[-pa\text{ object relative}:
\]
\[
[p\text{ad.m}a-s ~ b\text{zos-}pa]-i ~ \text{mog.mog de}
\]
\[
P\text{ema-ERG make-PA-GEN momo ~ DEM}
\]
\[
\text{‘the momo that Pema made’} ~ -pa’i \geq -pe
\]

Semantically, we could cash out this intuition with intersective modificational semantics: \([(8)] = [\text{argument nominalization}] \cap [\text{NP}]\)
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\text{[pad.ma-s bzos-}pa\text{-i mog.mog de} \\
\text{Pema-ERG make-PA-GEN momo DEM} \\
\text{‘the momo that Pema made’} \quad -pa'i > -pe
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\text{[pad.mā-s bzos-} \text{pa]-’i} \quad \text{mog.mog de}
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‘the momo that Pema made’

Semantically, we could cash out this intuition with intersective modificational semantics: 
\( [8] = [\text{argument nominalization}] \cap [\text{NP}] \)
Diachronic evidence

Historical evidence supports the view that the non-\textipa{-pa} nominalizers originated as various nominal endings, with their function later extended to productive relative clauses (DeLancey 2002).

- In Classical Tibetan, -\textipa{mkhan} had only one use, as a derivational suffix for trades and professions:
  
  \textit{shing-mkhan} = \textit{wood-MKHAN} ‘carpenter’

- The locative nominalizer -\textipa{sa} derives from the root \textipa{sa} ‘place.’

Instead, Classical Tibetan used -\textipa{pa} for all relative clauses.

But a question remains: Are “relative clauses” \textit{synchronously} adjoined argument nominalizations (8)? (Spoiler: No.)
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- But a question remains: \textbf{Are “relative clauses” \textit{synchronously adjoined argument nominalizations} (8)?} (Spoiler: No.)
The “nominalizers”

(10) **Nominalizers by choice of pivot: (≈3)**

- *-mkhan* རྣམ་ transitive subjects
- *-sa* མ ཞ མ locative arguments
- *-yag* ལེག་ instrumental arguments and imperfective objects
- *-pa* བ ཞ བ perfective objects

- For intransitive subjects, there is variation and apparent optionality between *-mkhan* and *-pa*; see e.g. DeLancey 1999:237–238. I set them aside today.

- I also set aside the interaction with aspect in object relatives, but you can ask me about it.
Nominalizers by choice of pivot: (=3)

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• I also set aside the interaction with aspect in object relatives, but you can ask me about it.
(11)  *mkhan subject relative:*

\[ RC \underline{\underline{\text{___}}} \text{mog.mog} \text{bzo-} \underline{\underline{\text{mkhan}}} \underline{\underline{\text{mi}}} \underline{\underline{\text{de}}} \]

momo  make-\text{MKHAN}  person  DEM

‘the person that made/makes momo’

As DeLancey 1999:239–242 notes, the use of *-mkhan* (roughly) correlates with the availability of ergative (*-gis*) for the gap position, but *-mkhan* is also used for relativization over dative (*-la*) possessor subjects of verbs of possession.
(12) **-sa locative relative:**

\[ [\text{RC} \text{ pad.ma-s } \text{ mog.mog bzo-sa}]^{-i} \text{ sa.cha de} \]

\begin{array}{llll}
\text{Pema-ERG} & \text{momo} & \text{make-SA-GEN} & \text{place DEM} \\
\end{array}

‘the place that Pema made/makes momo’

\(-sa\)'i > -pe

-\text{sa} reflects a locative (-la) or ablative (-nas) gap.
(13)  -yag instrumental relative:

\[
[\text{RC} \quad \text{pad.ma-s} \quad \text{mog.mog bzo-yag}]^{-i} \quad \text{mog.zangs de}
\]

Pema-ERG    momo    make-YAG-GEN steamer    DEM

‘the steamer that Pema made/makes momo with’

\[-yag’i > -ye\]

-yag reflects an instrumental (-gis/kyis/gyis/s) gap (or imperfective theme gap).
There are reasons to suspect that -pa somehow differs from the others:

1. Classical Tibetan used only -pa. Cognates of -pa are found across the Tibeto-Burman family (DeLancey 2002, Noonan 2008).

2. For verbs with distinct perfective and imperfective stems, -pa takes the perfective stem while all others take the imperfective stem. ‘make’: PERF bsos /sö/; IMPF bso /so/

3. DeLancey 1999:234: -pa is “unstressed and subject to drastic phonological reduction... while the other three show compound phonology; this is consistent with their derivational origin.”
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-pa vs the others

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§2 Long-distance relativization
“Long-distance” (LD) relative clauses relativize over an argument in an embedded clause. No previous work has described LD relativization in Tibetan — nor, to my knowledge, in any other Tibetic language.

- All uncredited data comes from fieldwork conducted in Dharamsala, India, with nine speakers.
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(14) **Embedded clause under ‘say’:**

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

Tashi-ERG Pema-ERG momo make-AUX say-AUX

‘Tashi said [that Pema made momo].’

(15) **LD object relative:**

\[ [\text{bkra.shis-kyis [CP pad.ma-s \_ bzos-song] lap-pa-’i mog.mog de-tso}] \]

Tashi-ERG Pema-ERG make-AUX say-PA-GEN momo DEM-PL

‘those \text{momo} [that Tashi said [that Pema made \_]].’
Embedded clause under ‘say’:

*Tashi said [that Pema made momo].'*

LD object relative:

*‘those momo [that Tashi said [that Pema made ___]].’*
(14) **Embedded clause under ‘say’:**

*Tashi said [that Pema made *momo*.]

\[bkra.shis-kyis \,[_{CP}\ pad.ma-s\ _mog.mog\ bzos-song]\ lap-song.\]

Tashi-ERG Pema-ERG *momo* make-AUX say-AUX

‘Tashi said [that Pema made *momo*].’

(15) **LD object relative:**

*Those *momo* [that Tashi said [that Pema made ___]].*

\[_[_{RC}\ bkra.shis-kyis\ [_{CP}\ pad.ma-s\ _\ bzos-song]\ lap-pa]\’i\ _mog.mog\ de-tso\]

Tashi-ERG Pema-ERG make-AUX say-PA-GEN *momo* DEM-PL

‘those *momo* [that Tashi said [that Pema made ___]].’
LD object relatives

► -pa only goes on the outermost verb of the relative clause. The embedded clause with a gap is a regular, finite clause.

(16) Marking on the embedded verb is ungrammatical:

* [[[RC bkra.shis-kyis [CP pad.ma-s ___ bzos-pa] lap-pa]-’i mog.mog de-tso
  Tashi-ERG Pema-ERG make-PA say-PA-GEN momo DEM-PL

Intended: ‘those momo [that Tashi said [that Pema made ___]]’ (=15)
(17) LD subject relative:

For LD subject relatives, there is subject extraction marking on the embedded verb, then -pa on the outermost clause!
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LD subject relatives

(18) **Embedded clause cannot be a regular finite clause:**

* [RC bkra.shis-kyis [CP ___ mog.mog bzos-song] lap-pa]-’i mi de
  
  Tashi-ERG momo make-AUX say-PA-GEN person DEM

Intended: ‘the [that Tashi said [___ made/makes momo]]’

(19) **-mkhan cannot be on the outermost clause:**

* [RC bkra.shis-kyis [CP ___ mog.mog bzos-song] lap-mkhan] mi de
  
  Tashi-ERG momo make-AUX say-MKHAN person DEM

Intended: ‘the [that Tashi said [___ made/makes momo]]’
LD locative relatives

(20) **LD locative relative:**

\[
\begin{align*}
&\text{འཁུགས་ཅིག་བདེ་མཛེས་མོ་ག་མོ་ག་བཟོ་ས་ལཔ་པའི་ས་ཆ་དེ་} \\
&\text{\([}_{RC}\text{ bkra.shis-kyis }\text{[}_{CP?}\text{ pad.ma-s }\text{ ___ mog.mog bzo-}\text{s}\text{a/}\text{song}]\text{]} \text{ Tashi-ERG Pema-ERG momo make-SA/}\text{*AUX]} \\
&\text{lap-}\text{pa/}\text{sa}-\text{’i sa.cha de} \\
&\text{say-PA/}\text{SA-GEN place DEM} \\
\text{‘the place [that Tashi said [Pema made/makes momo ___]]’}
\end{align*}
\]
(20) **LD locative relative:**

西藏語言中的複數名詞動詞結構

\[
\text{[RC \ bkra.shis-kyis [CP? \ pad.ma-s \ ___ \ mog.mog \ bzo-sa/*song]}
\]

\begin{align*}
\text{Tashi-ERG} & \quad \text{Pema-ERG} & \quad \text{momo} & \quad \text{make-SA/*AUX} \\
\text{lap-pa/*sa]-’i} & \quad \text{sa.cha de} \\
\text{say-PA/*SA-GEN place DEM} & \\
\text{‘the \ place [that Tashi said [Pema made/makes momo ___]]’}
\end{align*}
(20) **LD locative relative:**

`[RC bkra.shis-kyis [CP? pad.ma-∂ ___ mog.mog bzo-sa/*song]]`

Tashi-ERG Pema-ERG momo make-SA/*AUX

`lap-pa/*sa]’i sa.cha de`

say-PA/*SA-GEN place DEM

‘the [that Tashi said [Pema made/makes momo __]]’
(21) **LD instrumental relative:**

\[ [_{RC} \text{bkra.shis-kyis} \; _{CP?} \text{pad.ma-s} \; \_\_ \text{mog.mog} \; \text{bzo-}yag/^*song] \]

- Tashi-ERG  
- Pema-ERG  
- momo  
- make-YAG/^*AUX

\[ \text{lap-pa/^*yag}^{-i} \; \_\_ \text{mog.zangs \; de} \]

- say-PA/^YAG-GEN steamer  
- DEM

‘the [that Tashi said [Pema made/makes momo with \_\_]]’
-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.
§3 Analysis
• Relativization involves building **full finite clauses**, followed by movement of the [REL] DP head to Spec,CP.
  
  • This movement is triggered by [PROBE:REL] on C.
    
    • In intermediate clause edges, [PROBE:REL] may be an “edge feature,” introduced to move the [REL] target which would otherwise go unmoved.
  
  • **AUX** spells out T. -pa/-mkhan/-sa/-yag all reflect different spell-outs for T+C[REL], which **override the pronunciation of T/AUX**.
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• **AUX** spells out T. -pa/-mkhan/-sa/-yag all reflect different spell-outs for T+C[REL], which **override the pronunciation of T/AUX**.
• Assume ergative subjects and dative subjects of verbs of possession move to Spec,TP, in order to be (Case) licensed.

• Movement from Spec,TP to Spec,CP is disallowed. This may be due to:
  • Criterial freezing (Rizzi and Shlonsky 2007)
  • (Spec-to-spec) anti-locality (Bošković 2016, Erlewine 2016, Deal to appear; Branan two talks ago)

So the subject must move directly to Spec,CP, skipping Spec,TP.

-\textit{mkhan} \iff T+C[REL] when the subject skipped Spec,TP.
-mkhan subject relatives

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Analysis: -sa and -yag relatives

- Treat instrumental and locative “cases” as postpositions.
- In attempting to Attract the [REL] postpositional object, P is incorporated into the verb (Baker 1988), making movement of the [REL] postpositional object possible.

- sa $\iff$ T+C[REL]+P[LOC]
- yag $\iff$ T+C[REL]+P[INSTR]
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\[ -yag \leftrightarrow T+C[REL]+P[INSTR] \]
-pa spells out T+C at the edge of the relative clause (to be revised).

\[-pa \iff T+C[REL(\text{final/non-edge-feature})]\]

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\[-pa \iff T+\text{C[REL(final/non-edge-feature)]}\]

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• The first movement takes place due to the intermediate C[PROBE:REL].
  • If this involves the subject skipping Spec,TP or P-incorporation, T+C is spelled out as -mkhan/-sa/-yag.
  • Otherwise T spells out AUX according to its normal tense/aspect/evidential specifications; C is null.
• At the edge of the relative clause — corresponding to the final landing site of movement — T+C is spelled out as -pa.
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Analysis: Long-distance relativization

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Two features

1. “Nominalized” verbs in rel. clauses are underlyingly full, finite verbs.
2. -mkhan/-sa/-yag reflect marked derivations.
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   - Embedding verbs such as ‘say’ — which otherwise take full finite CP complements — **take complement clauses marked by** **-mkhan/-sa/-yag** when a marked local extraction has taken place (17, 20, 21).

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Two features

2. -mkhan/-sa/-yag reflect **marked derivations**, instead of e.g. straightforwardly moving the head DP, followed by *wh/case-agreement* (Chung 1994, Pearson 2001, Rackowski and Richards 2005).

This derives a generalization regarding **head-internal relative clauses**:

(22) The internal head of a Tibetan head-internal relative clause must be *unmarked* (absolutive).
2. -mkhan/-sa/-yag reflect marked derivations, instead of e.g. straightforwardly moving the head DP, followed by wh/case-agreement (Chung 1994, Pearson 2001, Rackowski and Richards 2005).

► This derives a generalization regarding head-internal relative clauses:

(22) The internal head of a Tibetan head-internal relative clause must be unmarked (absolutive).
Tibetan also has head-internal relative clauses (HIRC):

(23) **Head-internal object relative:**

\[\text{པད་མས་མོག་མོག་བཟླ་པ་དེ} \]

(pad.ma-s mog.mog bzos-pa] de

Pema-ERG momo make-PA DEM

‘the momo that Pema made’ (=9)
Head-internal relative clauses

However, **HIRCs are limited to unmarked/absolutive heads.**

(24) **-mkhan subject relative:**

* [mi-(cig)-(gis) mog.mog bzo-mkhan/bzos-pa] de
  
  person-one-ERG momo make-MKHAN/make-PA DEM

Intended: ‘the person that made/makes momo’

The same can be shown for instrumental and locative heads.
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\[ * [\text{mi-} (\text{cig}) - (\text{gis}) \text{ mog.mog bzo-} \text{mkhan}/\text{bzos-pa}] \text{ de} \]

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Analysis: head-internal relatives

- Suppose relativization always involves movement of the head noun to Spec,CP, but **HIRCs reflect pronunciation of a lower copy of the head.**

- Further assume that DP must be Case-licensed by their pronounced position (or lower) (see e.g. Takahashi and Hulsey 2009).
  - In object relatives, that lower position is already a Case licensing position, so the head can be safely pronounced there.
  - If the head was a subject, **it skipped Spec,TP**, foregoing licensing. There is no lower copy to pronounce in a licensed position.
  - If the head was a postpositional object, **the postposition was incorporated into the verb**. Even if the head DP could be pronounced in its lower position, it will no longer be licensed.

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§4 Another word order and the nature of -pa
Another word order

Long-distance relativization can also take another form:

(25) **Another LD subject relative:**

\begin{align*}
\text{bkra.shis-kyis lap-} & \text{pa’i mog.mog bzo-} \text{mkhan } \text{mi de} \\
\text{Tashi-ERG say-PA-GEN momo make-MKHAN person DEM} \\
\text{‘the person [that Tashi said [___ made/makes momo]]’ (}=17)
\end{align*}
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‘the person [that Tashi said [___ made/makes momo]]’ (=17)
This word order appears to involve **optional clausal pied-piping**:

- The head moves to the edge of the embedded clause, then the entire embedded clause moves; i.e. what Heck (2008, 2009) calls “pied-piping with secondary fronting” (but all to the right); *or*
- Probing for [REL] from the higher clause edge first moves the entire embedded CP, after which it can extract the head noun from it; see e.g. Van Urk and Richards 2015.
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Now consider this option for LD object relativization:

(26) **Another LD object relative:**

\[
\text{[CP bkra.shis-kyis}_{\text{Tashi}}-\text{ERG} \leftarrow \text{lap-pa]}-\text{’i [CP pad.ma-s}_{\text{Pema}}-\text{ERG} \rightarrow \text{bzos-pa]}-\text{’i mog.mog de-tso}_{\text{DEM-PL}} \]

‘those \text{momo} \text{[that Tashi said [that Pema made ___]]}’ (=15)

▶ Now both clauses get -pa marking!
Another word order

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\]

- Tashi-ERG  
- say-PA-GEN  
- Pema-ERG  
- make-PA-GEN  
- momo  
- DEM-PL

‘those momo [that Tashi said [that Pema made ___]]’ (=15)

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Another word order

It then cannot be that -pa marks the (logical) edge of the entire relative clause.

The contrast between (26) and (15) above teaches us that -pa is a marker of a final step of movement (Georgi 2017), and the movements of the head noun and the embedded CP each count as their own chain.
We also learn that each V-*pa-GEN cannot be a pre-built argument nominalization which intersectively modifies the NP:

\[ ([26]) = [\text{those momo that Tashi said that Pema made}] \]

\( \neq \text{THOSE(}[\text{what Tashi said}] \cap [\text{what Pema made}] \cap [\text{momo}] ) \)
§5 Conclusion and consequences
Conclusions

Relativization in Tibetan involves “nominalized” verbs, which appear to be reduced/non-finite.

**Today**: New data from long-distance relativization helps us better understand the nature of such “nominalizations.”
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- LD relatives with embedded clauses in-situ (§2) show that “...V-mkhan/-sa/-yag” can in fact be full finite CPs.
- Other LD relatives (§4) show that “...V-pa” cannot always be a pre-built argument nominalization, used as an intersective modifier.

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LD relativization shows that -mkhan/-sa/-yag are markers of marked, local gaps, whereas -pa is a marker of final movement in relative clauses.

- This is reminiscent of patterns of LD extraction in other language families with extraction marking morphology that distinguishes subject/non-subject/locative/instrumental/... targets; see e.g. “voice” morphology in Austronesian (Chung 1998, Rackowski and Richards 2005, a.o.) and Dinka (Nilotic; Van Urk 2015), also Halkomelem Salish (Hukari 2010).

- Further descriptions of LD extraction — in Tibetan but also in other languages with similarly rich but distinct extraction marking systems — has the potential to significantly inform our understanding of the nature of Ā-movement processes and their morphosyntactic reflexes.
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Thank you! Questions?

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