Patterns of relativization in Austronesian and Tibetan

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

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

(1) Agent and theme relatives in Tagalog:

a. <u>bata</u>=ng [**b<um>ili** ng tela] child=lk <prf.av>buy gen cloth

'child who bought cloth'

b. <u>tela</u>=ng [**b<in>ili-∅** ng bata] cloth=LK <PRF>buy-PV GEN child

'cloth that the child bought'

(2) Agent and theme relatives in Tibetan:

a. [deb **'bri-mkhan**] <u>mi</u> book write-мкнам person

'person(s) who wrote/writes book(s)'

b. [pad.ma-s **'bri-pa**]-'i <u>dep</u> 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)a.Tibetan:
(perfective)<um>agents-mkhan 지지적'
agentsagents-anlocatives/goals-sa 지'
locatives/goalslocatives/goalsi-instruments/ben.-yag ╙ག'
themesinstruments

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	i-	instruments/ben.	-yag धना	instruments
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- for Philippine-type languages, as part of these languages' voice systems;
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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.

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

§2 Philippine-type languages

(4) **Tagalog voice alternation:**

a. Actor Voice (AV):

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.'

b. Patient Voice (PV):

B<in>ili-Ø ng bata **ang tela** sa palengke para sa nanay. <PRF>buy-PV GEN child ANG cloth DAT market for DAT mother 'The child bought **the cloth** at the market for mother.'

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c. Locative Voice (LV):

B<in>ilh-**an** ng bata ng tela **ang palengke** para sa nanay. <PRF>buy-LV GEN child GEN cloth ANG market for DAT mother 'The child bought (the) cloth at **the market** for mother.'

d. <u>Benefactive/Instrumental Voice (BV/IV)</u>:

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- ► 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 (4), 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...
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- (5) Voice alternation of clause-embedding verb:
 - a. Nag-sabi ang kalabaw [na masarap ang bulaklak].
 PRF.AV-say ANG water.buffalo that delicious ANG flower
 'The water buffalo said [that the flower is delicious].'
 - S<in>-abi-Ø ng kalabaw [na masarap ang bulaklak].
 <PRF>say-PV GEN water.buffalo that delicious ANG flower
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Although the embedded clauses in (5) are uniformly introduced with *na* 'that,' never *ang*, we hypothesize that it is the grammatical "subject" in (5b).

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(6) Long-distance (LD) relativization of an embedded goal:

kalabaw [na ...said the teacher

water.buffalo that

[na bi-bigy-**an** ng lalaki ng bulaklak __]] that ASP-give-LV GEN man GEN flower

'water buffalo [that the teacher said

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(6) Long-distance (LD) relativization of an embedded goal:

kalabaw [na **s<in>abi-∅** ng guro water.buffalo that <PRF>say-PV GEN teacher

[na bi-bigy-**an** ng lalaki ng bulaklak]] that ASP-give-LV GEN man GEN flower

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- 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.
- 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.

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§3 Tibetan
Verbs in Tibetan end with a series of auxiliaries — glossed Aux together here — encoding tense/aspect/evidential values (Tournadre and Jiatso 2001, Vokurková 2008). Relativization involves a distinct verb form where the auxiliaries are replaced by a "nominalizer" ending.

(7) ᅯ피ː역작ː한전작·국칙·학국회 (8) 국ᅯ·국칙·최四적·최 bkra.shis-kyis deb 'bri-gi.dug. → [_{RC} _____ deb 'bri-mkhan] <u>mi</u> Tashi-ERG book write-AUX book write-мкнам person 'Tashi is writing a book.' 'person who wrote/writes/is writing Verbs in Tibetan end with a series of auxiliaries — glossed Aux together here — encoding tense/aspect/evidential values (Tournadre and Jiatso 2001, Vokurková 2008). Relativization involves a distinct verb form where the auxiliaries are replaced by a "nominalizer" ending.

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(7) 고핏원작'한한작'국국'**덕확'한 국**피 (8) 국국'**덕확' 최면적 '**최' bkra.shis-kyis deb **'bri-gi.dug**. → [_{RC} _____ deb **'bri-mkhan**] <u>mi</u> Tashi-ERG book write-AUX book write-мкнам person 'Tashi is writing a book.' '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) حَّاح: क्षित: वेश्व: स्पाने: ज्वाल: केव्र: सेंग्रेन्त्र]

[[bod.skadshes-**pa**] de]galchen.pored.Tibetan languageknow-PADEMimportancegreatCOP.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 মন্'ঝঝ'দার্রিম'**ম'**ন্ট pad.ma-s bzos-**pa** de Pema-ERG make-PA DEM 'what Pema made'

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(10) -pa theme nominalization: (11) -pa object relative: ধন্ অধ্য দাই আমান্দ্ৰী আমানদ্ৰী আমানদ্ৰাৰ্য আমানদ্ৰী আমানদ্ বিৰাৰদ্বী আমানদ্ৰী আমানদ্ৰী আমানদ্ৰী আমানদ্ৰী আমাদ্ৰী আমানদ্ৰী আমানদ্ৰী আমানদ্ৰী আমানদ্ৰী আমানদ্ৰী আমানদ্ৰী আমা বিৰাৰদ্বী আমানদ্বী আমানদ্বী আমানদ্বী আমানদ্বী আমাদ্বী আমাদ্বী আমানদ্ৰী আমাদ্বী আমাদ্বী আমানদ্বী আমাদ্বী আমাদ্বী আ বাৰদ্বী আ

'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_i(=GEN) + <u>NP</u>_i (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:

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(14) "Nominalizers" by choice of pivot:

expanding on (3a)

<i>-mkhan</i> ঝাশ্বি	agents/subjects
-sa 🔊	locatives/goals
-yag অগ্ <u>য</u>	instruments and imperfective themes
-pa '	perfective themes

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

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-pa ^{द्} ।	perfective themes

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(15) -sa locative relative:

ุ่นๆ พง พัญ พัญ กลั เ

 [RC pad.ma-s _____ mog.mog bzo-sa]-'i
 sa.cha de

 Pema-ERG
 dumpling make-sA-GEN place
 DEM

 'the place that Pema made/makes dumplings'
 -sa.i>-se

-sa reflects a gap with e.g. dative/locative (-la) or elative (-nas) case.

-*yag* reflects an instrumental (*-gis/kyis/gyis/s*, homophonous with ergative) gap, or imperfective theme gap.

-pa vs the other nominalizer endings

- Classical Tibetan used only -pa. Cognates of -pa are found across the Tibeto-Burman family (DeLancey 2002, Noonan 2008). Non-pa endings originated as various nominal endings, with their function later extended to productive relative clauses (DeLancey 2002):
 - In Classical Tibetan, -mkhan had only one use, as a derivational suffix for trades: shing-mkhan = wood-мкнам 'carpenter'
 - The locative nominalizer -sa derives from the root sa 'place.'
- DeLancey 1999:234: -pa is "unstressed and subject to drastic phonological reduction... the other three show compound phonology; this is consistent with their derivational origin."
- For verbs with distinct perfective and imperfective stems, -pa takes the perfective stem while all others take the imperfective stem: e.g. 'make' = PRF bsos- /sø/; IMPF bso- /so/.

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(17) Embedded clause under 'say':

୳୩.ସିଷଂଶ୍ରିଷ<u>:ମଧ୍ୟ ଅଷ୍ଟାର୍ଥସ୍ୟ ଅଞ୍ଚିଷ: ଏ</u>ସ: ହୁମ୍

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].'

(17) Embedded clause under 'say': দশ্ম' দ্বিগ' শ্ৰীগ' শন্ ন অগ্য ক্ৰিন্দা কৰি ন আঁক কি প্ৰেম' কি ন 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 <u>dumplings</u>].'

[_{RC} bkra.shis-kyis [pad.ma-s ____ bzos-song] lap-**pa**]-'i <u>mog.mog</u> de-tso Tashi-ERG Pema-ERG make-AUX say-PA-GEN momo DEM-PL 'those <u>momo</u> [that Tashi said [that Pema made ___]]'

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

(18) ๆภาะคิพาฏิพานรามพากลัพาพ์ราพนานดิา<u>มัตา</u>ริาร์

[_{RC} bkra.shis-kyis [pad.ma-s ____ bzos-song] lap-**pa**]-'i <u>mog.mog</u> de-tso Tashi-ERG Pema-ERG make-AUX say-PA-GEN momo DEM-PL 'those momo [that Tashi said [that Pema made ___]]'

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*[RC bkra.shis-kyis [pad.ma-s _____ bzos-pa] lap-pa]-'i mog.mog de-tso Tashi-ERG Pema-ERG make-PA say-PA-GEN momo DEM-PL 'those momo [that Tashi said [that Pema made ___]]'

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*[_{RC} bkra.shis-kyis [pad.ma-s _____ bzos-**pa**] lap-**song**]-'i mog.mog de-tso Tashi-ERG Pema-ERG make-PA say-AUX-GEN momo DEM-PL 'those momo [that Tashi said [that Pema made ___]]'

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(19) นทีเป็ลเฏ็ลเช้าเช้าเช้าไล้ สาย (19) นที่ (19)

[_{RC} bkra.shis-kyis [____ mog.mog bzo-**mkhan**] lap-**pa**]-'i <u>mi</u> de Tashi-ERG momo make-мкнам say-pa-gen person DEM 'the <u>person</u> [that Tashi said [____ made/makes momo]]'

[_{RC} bkra.shis-kyis [_____mog.mog bzo-**mkhan**] lap-**pa**]-'i <u>mi</u> de Tashi-ERG momo make-мкнам say-pa-GEN person DEM 'the <u>person</u> [that Tashi said [____ made/makes momo]]'

(19) กฃฺ:ศิพ:ฏิพ:มัศฺามัศฺากลัา**มุทสา**ณนา**น**จิ:<u>ม</u>ิร่า

* [_{RC} bkra.shis-kyis [____mog.mog bzo-**song**] lap-**pa**]-'i <u>mi</u> de Tashi-ERG momo make-AUX say-PA-GEN person DEM 'the <u>person</u> [that Tashi said [____made/makes momo]]'

(19) กฃฺๅ จิพฺ ฃฺิพ มัจๅ มัจๅ กลั **มุทส** พน น จิ <u>ม</u>ิร์.

*[_{RC} bkra.shis-kyis [____ mog.mog bzo-**song**] lap-**mkhan**]-'i <u>mi</u> de Tashi-ERG momo make-AUX say-мкнам-GEN person DEM 'the person [that Tashi said [____ made/makes momo]]'

(20) ๆภูา:ผิงาฏิงานรามงามัตามัตาาล์า**งา**ณนา**น**ดิา<u>งเฮาร</u>า

[_{RC} bkra.shis-kyis [pad.ma-s ____ mog.mog bzo-**sa**/***song**] lap-**pa**/***sa**]-'i

Tashi-erg Pema-erg momo make-sa/*aux say-pa/*sa-gen

sa.cha de

place DEM

'the <u>place</u> [that Tashi said [Pema made/makes momo ____]]'

(21) ๆมีเป็หาปู้หางรางหางั้ญพี่มีๆ เวลี้ เพตา เคงานใน <u>พี่ญี่สรง</u>ร้า

[_{RC} bkra.shis-kyis [pad.ma-s ____ mog.mog bzo-yag/*song] lap-pa/*yag]-'i

Tashi-erg Pema-erg momo make-yag/*aux say-pa/*yag-gen

mog.zangs de

steamer DEM

'the steamer [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.
 - -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"
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Long-distance relativization can also take another form:



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

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 (22) Another LD subject relative:
 าฏาเป็จเขาปู๊งเขาเจาร์เจ้าตาลังตาเจ้ารังเตส เช่าว่า

 [_{RC} bkra.shis-kyis_lap-pa]-'i [___mog.mogbzo-mkhan] mi de Tashi-ERG say-PA-GEN momo make-мкнам person DEM 'the person [that Tashi said [___made/makes momo]]' =(19)

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Long-distance relativization can also take another form:

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An argument against the nominalization hypothesis

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 momos]] ≠ THE([[what Tashi said]] ∩ [[who made momos]] ∩ [[person]]) Now consider this word order variant for LD object relativization:

- (23) Another LD object relative: བཀྲ་ཐིས་ཀྱིས་ལཔ་ཕའི་པད་མས་བཐོས་ཕའི་མོག་མོག་རོག་ [_{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)

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 - ► 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: দশ্য:দীশ শূীশ অধ্য র্থনিন্<u>ম</u> <u>ম</u>র্মা <u>মিলা নের্র মার্মিন</u>

* 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.

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* 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)

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- 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:* **བཀྲ་ཐིལ་ཀྱིས་བསམ་ཡག**་འོམོག་མོག་བརོ་མགན་མོ་དོ་ [bkra.shis-kyis ____bsam-**yag**]-'i [____mog.mog bzo-**mkhan**] <u>mi</u> de Tashi-ERG think-YAG-GEN dumpling make-мкнам person DEM 'the <u>person</u> [that Tashi thinks [____made/makes dumplings]]'
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- 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.
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- 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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§4 Synthesis and discussion

- 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 Ā-extraction, together with multiple "voices" to make different arguments the "subject."
 - Tibetan relative clause forms are distinct from regular finite verbs.

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

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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.):
 - Philippine-type voice morphemes are *responses* to extraction
 (e.g. relativization) of a particular type of argument;
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We can relate (B) to the "prefield" requirement in Germanic V2:

- (26) Swedish V2 alternation:
 - *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.'

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

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- (b) = A single argument in each clause by default, a *topic*
 - (a) in Germanic V2: moves to clause-initial position;
 - (b) <u>in Philippine-type languages:</u> receives a particular marker/case (Tagalog *ang*);
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- But Ā-extraction such as relativization or *wh*-movement proceeds through the ^(b)-position/process, blocking movement of a topic:
 - (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

In Philippine-type languages, assuming that the assignment of *ang* and \overline{A} -extraction underlyingly involve the same process (Chen 2017, Erlewine, Levin, and Van Urk 2017, in prep.), and both feed \bigcirc , we derive the apparent "subject-only" extraction restriction.

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- Tibetan relativization suffixes are responses to extraction of a particular type of argument just like in Philippine-type languages (A) 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.

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