

V-to-T-to-C grammaticalization

and the development of accusativity in Tibetan subject relative clauses

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- Dixon's (1994) generalization
 - ▶ *"If it were relative clauses that entered into a[n] [ergative] split, we might expect the subordinate clause to show 'ergative' characteristics - and the main clause would, if it differed from subordinate clauses, be of the accusative type."* (p.102ff.)
- Tibetan has developed the exact opposite split.

Tibetan vs. Dixon's generalization

- Matrix clauses are split-ergative in Modern Lhasa Tibetan (1) -
 - - and in fact fully ergative in Old and Classical Tibetan (2).
 - But MLT has developed a subject-object (ACC) alignment in relative clauses:
 - ▶ Relative COMP *mkhan* licenses all types of subject traces
 - ▶ However, historically it has *not* been compatible with unaccusatives/statives.
- (1) Pa-sangs mog-mog bzos-**kyi**-red
Pasang momo make.**impfv**.neut
'Pasang made momos' (MLT)

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(2) ḥjang rje-gol=gyis kyang pyag-ḥtshal te
Jang master-servant=ERG also prostrate.**impfv** CONJ
'The master and servants of Jang also were prostrating' (OT)

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 momo make COMP cook

 'the cook who makes momos' (MLT)

b. [ri=nas ril t_i mkhan] mi_i
 mountain=ABL fall COMP person

 'the person who falls from the mountain' (MLT)

- How does a subject-oriented relative complementizer (*mkhan*) develop, in an ERG-aligned language, from a non-subject-oriented source?
 - ▶ What categorial changes?
 - ▶ When and how does case alignment in *mkhan*-embedded environments “switch”?
- How do Empty Category-licensing features grammaticalize “up the tree”?

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Overview of conclusions

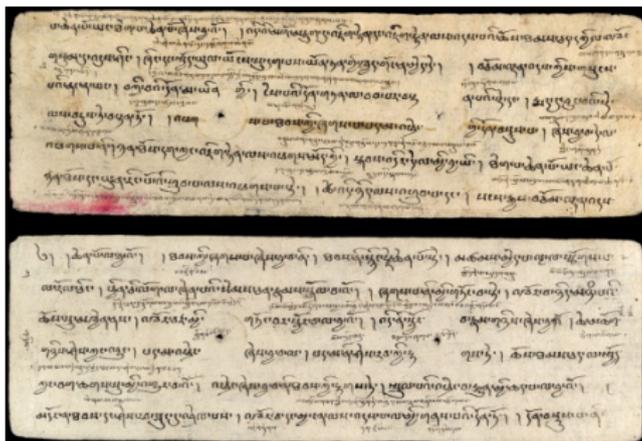
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- Alignment switch happens during **T(n)-to-C**: target position for EC licensing is also translated “up the tree.”
 - ▶ Categorical reanalysis may be accompanied by featural reanalysis.
- C-stage *mkhan* inherits a T-feature from T, which is evidenced by a differential T-feature deletion pattern between subject and object RCs.

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Tibetan: a brief profile

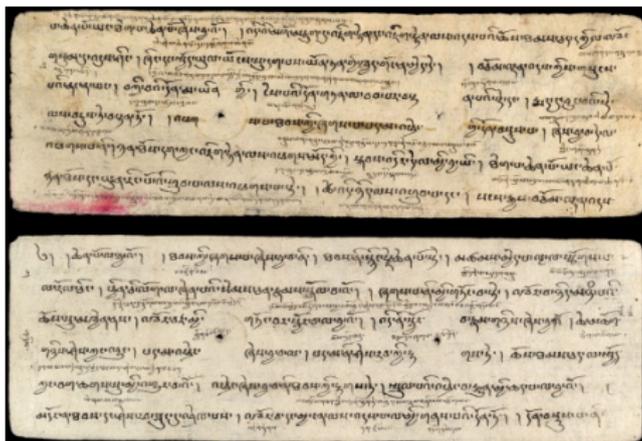
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- SOV, suffixing, ergative (OT, CT)/aspectually split ergative (MLT)
- Second oldest written language in Sino-Tibetan (650 AD; cf. Hill 2011) with a Brahmic abugida script



Source: van Schaik, Sam et al. "Writing, painting and sketching at Dunhuang: assessing the materiality and function of early Tibetan manuscripts and ritual items". *Journal of Archaeological Science*, Vol. 53 (2015):110-132.

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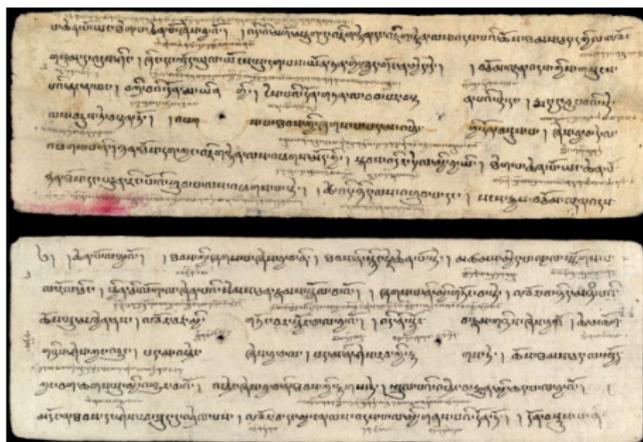
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Old Tibetan, Classical Tibetan, modern vernaculars

- 7-11c. -
Old Tibetan, originally the language of the Yarlung valley, “colonized the entire plateau with the expansion of the Tibetan Empire,” reaching its height in 9c., and “continued to be the lingua franca in the oasis cities of the Silk Road for some decades after the Tibetan empire lost control of these territories” (Hill 2011:112).
- 11c. et seq. -
Classical Tibetan developed, becoming “a stable but changing written standard.”
- **Modern vernaculars**: Central (Ü-Tsang), Amdo, Khams, et al.
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- **Old Tibetan Documents Online (OTDO)**
 - ▶ Most comprehensive digitized, searchable collection of OT documents
 - ▶ Dunhuang manuscripts (Pelliot tibétain, ITJ, et al.); some inscriptions and paper/wooden documents.
- **Derge Kanjur** through the *eKanjur* project at Uni-Wien
 - ▶ Entire corpus of the Tibetan *Bkaḥ-ḥgyur* (Translated Words of the Buddha) canon, as printed in Derge (Dégé), Sichuan.
 - ▶ Exemplary of the high Classical register

Relative COMPS in OT/CT are invariant: *ba/pa*

(4) a. Subject RC:

[t_i mkho-sham chen-pho bgyI **ba**] ɰI rtsis-mgo_i
administration great make.IRR COMP GEN statute

‘the manuals which would create great administration’ (OT) [Pt1288:28]

b. Object RC:

[bdag=gis t_i bsad **pa**] ɰi mi_i de
1SG=ERG kill.PFV COMP GEN person DEM

‘the person whom I killed’ (CT) [D353.p76-1-84a]

c. Dative/locative RC:

[rta t_i mgyogs-su ɰphel **ba**] ɰi gnas_i
horse quickly multiply.IMPV COMP GEN place

‘the place where horses multiply quickly’ (OT) [Pt1286:37]

Innovative relative COMPs in MLT are structure-sensitive

(5) a. Subject RC:

[t_i mog-mog bzos **mkhan**] ma-byan_{*i*}
momo make COMP cook

'the cook who makes momos' (MLT)

b. Object RC:

[nga=s t_i bris **yag**] yi-ge_{*i*}
1SG=ERG write COMP letter

'the letter that I write' (MLT)

c. Dative/locative RC:

[Ye-shes=kyis t_i ho-ma sprad **saḥi**] zhi-mi_{*i*}
Yeshe=ERG milk give COMP cat

'the cat to which Yeshe gives milk' (MLT)

MLT *mkhan* licenses extraction of all types of subjects.

- (6) a. **Transitive/unergative** subject extraction:

[t_i mog-mog **bzos** mkhan] ma-byan_i
momo make COMP cook

'the cook who makes momos' (MLT)

- b. **Unaccusative** subject extraction:

[ri=nas **ril** t_i mkhan] mi_i
mountain=ABL fall COMP person

'the person who falls from the mountain' (MLT)

- c. **Stative** subject extraction:

[deng-sang t_i Lhasa=la **yod** mkhan] phru-gu_i
these.days Lhasa=LOC EXIST COMP child

'the children that are in Lhasa these days' (MLT)

- But *mkhan*'s subject orientation is an innovation.

- **Old Tibetan:** lexical control V 'to know (how to do)'
 - ▶ Selects transitive/unergative *v*P complements
- **Classical Tibetan:** agent nominalization T(*n*) head
 - ▶ Selects agentive *v*P complements
- **Modern Lhasa Tibetan:** subject relative COMP
 - ▶ Moves all types of subjects

- In OT, *mkhan* starts out as a lexical verb “to know” (7).

(7) [smra myi **mkhan**] gyi ma-mo
speak NEG know GEN [female.deity]
‘[goddess] who does not PRO know speaking’ (OT) [Pt 1046b:2]

- Lexical semantics: ‘to know how to’
- Can be directly negated.
- Note that (7) happens to be an RC. Why does it not have the invariant COMP *ba*?
 - ▶ *mkhan* belongs to a special class of (*m*-prefixed) intransitive/stative verbs (Matisoff 2003:117), which can be relativized by an empty COMP.

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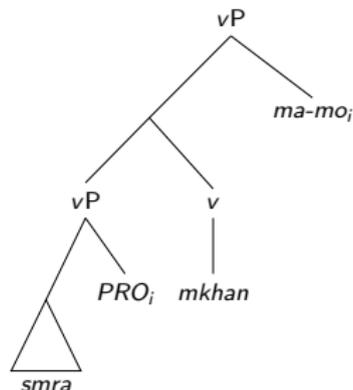
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Analysis: V-stage

(7') OT: v mkhan



'Goddess knows PRO to speak.'

- *mkhan* lexically selects a vP complement with a PRO subject. The subject of *mkhan* controls the PRO.
- The lexical semantics of *mkhan* 'to know' restricts selection to agentive vPs .
 - ▶ 'know to speak/run/#die/#exist'
- PRO = [Spec, vP]: control targets the external argument position
 - ▶ PRO.ERG, if assuming standard Case marking on PRO (Landau 2006, San Martin 2004)

From OT to CT: VP nominalization to TP nominalization

- In OT, *mkhan* is also attested in zero-converted nominalizations: names of professions.

(8) a. lug=gyis **lam-mkhan** byed kyang myI nus
sheep=ERG **road-knower** do also NEG be.able
'Sheep are also not able to work as **road-guides**' (OT)
[Pt239:r8-3]

b. **ri-mo-mkhan** ni las ma lags
painting-knower TOP work NEG be.so
'As for **painters**, (their) work is not like so' (OT) [Pt1062:22]

- V-stage traits:
 - ▶ Lexical semantics 'know-er'
 - ▶ No *vP* shell recursion: no other verbs cannot be embedded under *mkhan* in these zero-converted NPs.

CT: *mkhan* is reanalyzed as T(*n*).

- **OT:**

Merge *mkhan* as V > Move through *v* and T / zero-conversion

[_{TP} ... [_{v₁P} ... [_{v₂P} PRO ...] *v₁t_{mkhan}*] _T*mkhan*]

- **CT:**

Merge *mkhan* as T(*n*)

[_{T(*n*)P} [_{vP} *t* ...] _{T(*n*)}*mkhan*]

- Reanalyzed as T(*n*) in CT: *mkhan* is able to select full *vP* complements: (9)

(9) [_{T(*n*)P} *me-tog phreng rgyud* *mkhan*] =*gyis smras-pa...*
flower rosary string(.IMPFV) NZR =*ERG say.PFV-PA*
'...said the one who strings flower rosaries' (CT) [D1.p3-1-22a]

$T_{(n)}$ *mkhan*: consequences

- Loss of lexical V semantics
 - ▶ No longer “to know/knower”: agent nominalizer instead.
- Inability to be negated: **m(y)i mkhan*
- No T inflection on embedded verb: only IMPFV form.
 - ▶ Consistent with the semantics of agent nominalizers
- $T_{(n)}$ nominalizers may have specific T-related semantics
 - ▶ In MLT, the object nominalizer $T_{(n)}$ *yag* contrasts minimally with *pa* in having IMPFV aspect: (10)

(10) hdi [nga=s bzos yag] red :: hdi [nga=s bzos pa] red
this 1SG=ERG make yag be.NEUT :: this 1SG=ERG make pa be.NEUT
'This is what I make/will make.' :: 'This is what I made.'

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From CT to MLT: T-to-C and subject trace licensing

- Up till now, the selectional properties of $\nu mkhan$ and $T_{(n)}mkhan$ have excluded unaccusative/stative complements.
 - ▶ Empty categories are licensed only at *external* argument positions ([Spec, $\nu P/VP$]) > “ergative alignment”
- Why is MLT *mkhan* able to license unaccusative/stative subject traces (11)?

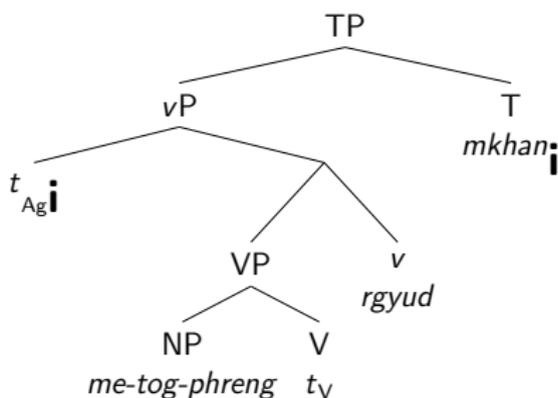
(11) [deng-sang t_i Lhasa=la **yod** mkhan] phru-gu $_i$
these.days Lhasa=LOC EXIST COMP child
'the children that are in Lhasa these days' (MLT)

From CT to MLT: T-to-C and subject trace licensing

- Proposal:
 - ▶ $T_{(n)}$ *mkhan* is reanalyzed as C *mkhan*.
 - ▶ EC-licensing feature on $T_{(n)}$ *mkhan* is inherited and translated upwards by C *mkhan*.
- In CT:
 - $T_{(n)}$ *mkhan* licenses (binds) t_{Ag} at [Spec, ν P]
- In MLT:
 - C *mkhan* licenses (moves) OP_{subj} at [Spec, \mathbf{TP}]

Analysis: EC-licensing feature from T-stage to C-stage

(12) CT: $T_{(n)}$ *mkhan* binds external subject trace at [Spec, **vP**]

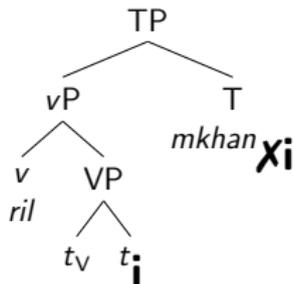


$\lambda x[\text{string}(x, fr)]$

'one who strings flower rosaries'

Analysis: EC-licensing feature from T-stage to C-stage

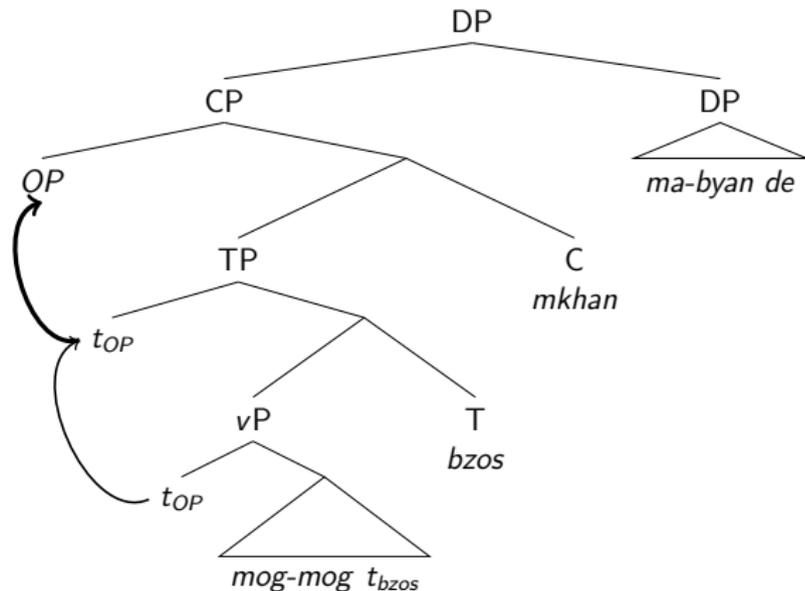
- (13) CT: $T_{(n)}$ *mkhan* cannot bind VP-internal DPs



Intended: 'one who falls'

Analysis: EC-licensing feature from T-stage to C-stage

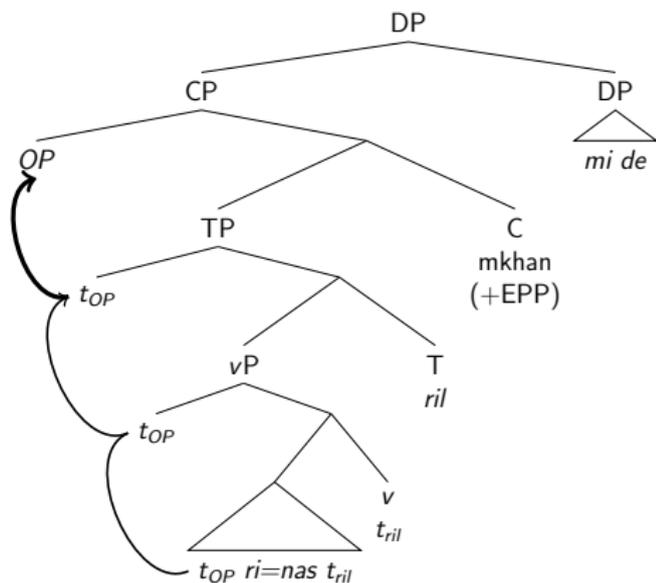
- (14) MLT: c_{mkhan} can move any subject from [Spec, **TP**]



'the chef who makes momos'

Analysis: EC-licensing feature from T-stage to C-stage

- (15) MLT: EPP on $_C mkhan$ can move any subject from [Spec, TP]



'the person who fell from the mountain'

- **Old Tibetan:** lexical control V ‘to know (how to do)’
 - ▶ Selects transitive/unergative *v*P complements
 - ▶ Licenses ERG PROs - “ERG alignment”
- **Classical Tibetan:** agent nominalization T(*n*) head
 - ▶ Selects agentive *v*P complements
 - ▶ Licenses traces at [Spec, *v*P] (binding) - “ERG alignment”
- **Modern Lhasa Tibetan:** subject relative COMP
 - ▶ Licenses subject OP traces at [Spec, TP] (OP movement) - “NOM alignment”

Differential T interpretations: a T-featural analysis

- We have a T-related asymmetry between MLT subject and object relative clauses:
 - ▶ Subject RCs with *mkhan* have no T-restriction: (20a)
 - ▶ Object RCs with *yag* are interpreted obligatorily as IMPFV: (20b)

- (20) a. chang ḥthung **mkhan** mgron-po de Ye-shes red
wine drink COMP guest DEM Yeshe COP.NEUT
'The guest who drank/drinks/will drink wine is Yeshe.'
- b. Ye-shes=kyis sbyang **yag** yig-gzugs de Dbu-can
Yeshe=ERG learn COMP font DEM Uchen
red
COP.NEUT
'The font that Yeshe **#learned**/learns/will learn is Uchen.'

Differential T interpretations: a T-featural analysis

- We have a T-related asymmetry between MLT subject and object relative clauses:
 - ▶ Subject RCs with *mkhan* have no T-restriction: (20a)
 - ▶ To get PFV interpretation in object RCs, *ba/pa* must be used: (21b)

- (21) a. chang ḥthung **mkhan** mgron-po de Ye-shes red
wine drink COMP guest DEM Yeshe COP.NEUT
'The guest who drank/drinks/will drink is Yeshe.'
- b. Ye-shes=kyis sbyang **baḥi** yig-gzugs de Dbu-can
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'The font that Yeshe learned/**#learns/#will learn** is Uchen.'

- Is there a unified explanation?

Subject RC with *mkhan*

- ▶ Has no T-restriction
- ▶ OP moves from [Spec, **T**P] to [Spec, CP]

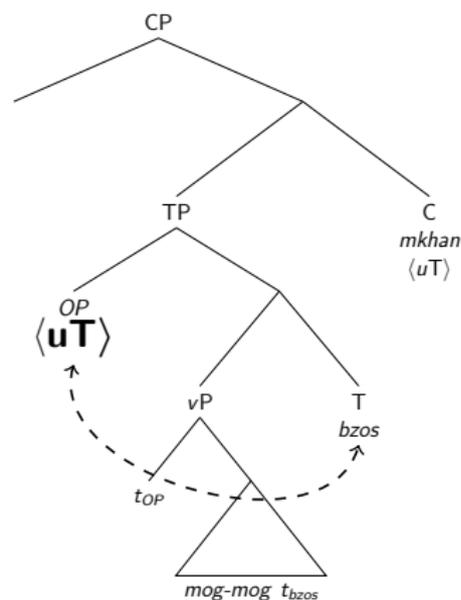
Object RC with *yag*

- ▶ Has T-restriction
- ▶ OP moves from [Spec, **v**P] to [Spec, CP]

T-featural theory of T-to-C movement

- Pesetsky and Torrego (2001)
 - ▶ Nominative Case assignment is the sharing of a head feature $[\mu T]$ by its specifier.
 - ▶ T-to-C movement is then motivated by the inherited $[\mu T]$ on C.

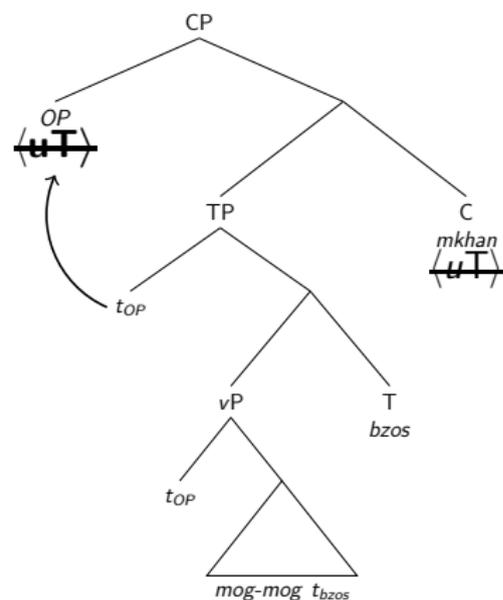
MLT subject-object RC asymmetry as a consequence of differential T-feature deletion



'(the chef) who cooks momos'

- Subject OPs get a T feature at [Spec, TP]
- The T feature is deleted after movement to [Spec, CP]
- Crucially, object OPs move directly to [Spec, CP] without getting a T feature at TP
- Consequently, the T feature on c_{yag} is not marked for deletion

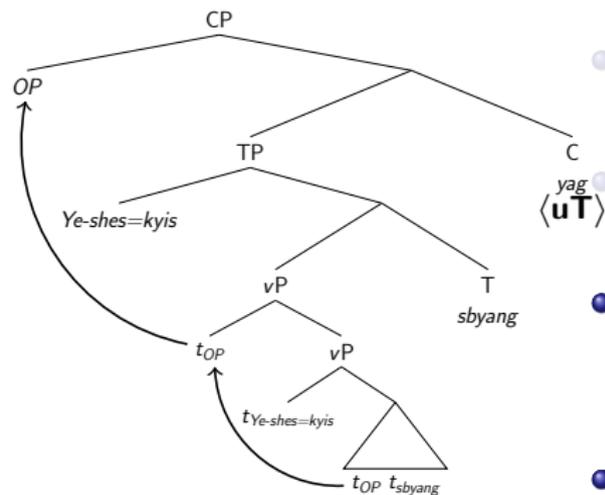
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MLT subject-object RC asymmetry as a consequence of differential T-feature deletion



'(the font) which Yeshe learns'

- Subject OPs get a T feature at [Spec, TP]
- The T feature is deleted after movement to [Spec, CP]
- Crucially, object OPs move directly to [Spec, CP] without getting a T feature at TP
- Consequently, the T feature on *c_{yag}* is not marked for deletion

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- The T-interpretation difference between object RCs with *yag* and subject RCs with *mkhan* is because subjects, and *not* objects, acquire a T feature at [Spec, TP], which then marks the T feature on C for deletion.
- Differential interpretation of the T-feature on C receives a unified explanation if we adopt a theory in which T-to-C movement entails marking-for-deletion of the T-feature on C.
 - ▶ “Structural” (NOM Case) and “inherent” (tense-aspect semantics) features on T are co-existent.

Conclusions

- MLT subject relative complementizer *mkhan* is reanalyzed from OT \sqrt{mkhan} through CT $T_{(n)}mkhan$, in the classic “upwards” fashion of Roberts and Roussou (2003).
- Upward reanalysis of functional heads may be accompanied by upward feature translation.
 - ▶ In Tibetan, this feature translation is manifested by a switch from “ergative alignment” to “accusative alignment” in *mkhan*-embedded environments during T-to-C reanalysis.
- The MLT-synchronic asymmetry in T-interpretations in subject vs. object RCs bears out a differential T-feature deletion pattern on C.

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Thank you.

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Appendix 1: *m*-prefixed stative verbs in OT/CT

- *mkhan* belongs to a special class of (*m*-prefixed) intransitive/stative verbs (Matisoff 2003).

- Special properties of *m*-prefixed verbs:

- ▶ No aspect-mood prefixal inflection

	IMPFV	PFV	IRR	IMP
SAD 'to kill'	g-sod	b-sad	g-sad	sod
NGAḥ 'to possess, be, exist'	m-ngaḥ	m-ngaḥ	m-ngaḥ	/

- ▶ Can be relativized with an empty COMP (9)

- (9) [rtsed-mo rtse zhing dgaḥ mgu [C ∅]] ḥi gnas=rnams
game play VPconj joy rejoice GEN place=PL
'the place where (one) plays games and rejoices' (CT) [D57.p41-1-209b]

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Appendix 2: How does *cmkhan* acquire a relative operator?

- Modifying GEN > appositive GEN > incorporation of GEN into *cmkhan* > reanalysis as OP inside relative CP.
- Appositive GEN structures are already attested in CT: (17)

(17) [$OP_j t_j$ rgyal-po-Lha-chen-po $\dot{h}i$ skra dang kha-spu $\dot{h}breg$
King.Mahadeva GEN hair and beard shave
mkhan] $_i$ gyi mi $_i$
NZR GEN person
'the person **that is King Mahadeva's hair and beard shaver**'

- After GEN incorporation in MLT: (18)

(18) [$OP_i t_i$ rgyal-po-Lha-chen-po $\dot{h}i$ skra dang kha-spu $\dot{h}breg$
King.Mahadeva GEN hair and beard shave
mkhan] mi $_i$
COMP person
'the person **who shaves King Mahadeva's hair and beard**'

- GEN in Tibetan behaves like a generalized λ -abstraction operator (cf. Chinese *de*, Cheng and Sybesma 2005).

- ▶ Appositive genitives
- ▶ Gapless relative clauses

(19) [dus gsum mnyam] gyi tshul-khrims
time three be.same GEN precept
'the precept that the three times are the same' (CT)
[D353.p76-1-182a]

- Before GEN incorporation: coreferentiality of agent trace and external DP supplied by pragmatics (aboutness relation)
- After GEN incorporation: coreferentiality grammaticalized as RC syntax