

Embedded clauses in Udmurt

Figuring out the label

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What's in a label? workshop

1 Introduction

In this talk we look at

- the size (and label) of embedded clauses in Udmurt
- the language-specific problems that arise when determining size (and label) of these clauses
- the articulation of the Udmurt embedded left periphery (when it is present)

We will claim that

- the *-m* participle is truncated below CP and so has no left periphery
- in the late-19th c. some embedded clauses had CP but none had split CP
- in the 20th c. both complement and relative clauses developed a split CP

Roadmap

- background to the language
- non-finite embedded clauses
- a closer look at *-m* non-finites
- the emergence of non-split CP
- the emergence of split CP

2 Background to Udmurt

About the language

- Uralic, Finno-Ugric, Permian branch (its closest relative is Komi)
- geographically Udmurtia is between the Kama and Vyatka Rivers
- agglutinative SOV
- one finite verb per sentence, widespread use of non-finite subordination
- Nom-Acc language with DOM (covert Acc will be indicated in parentheses)
- articleless language

Current situation

- minority language in the Russian Federation
- 552 299 total Udmurt ethnic population, of which 339 800 native speakers (2010 census)
- second official language of the republic
- but widespread bilingualism & intensive influence of Russian
- older generations are Udmurt-dominant, learnt Russian at school
- younger generations are balanced bilinguals or Russian-dominant
- undergoing an SOV to SVO change

Previous research on the language

- mostly from the descriptive and typological viewpoint
- until recently FU studies have mostly been interested in reconstruction
- only recent interest in the living language
- thus only recent intensive work on syntax as opposed to morphology
- Udmurt linguists are often reluctant to give judgments and want the researcher to look at published books or journals
- we still don't know basic things about the syntax of Udmurt

3 FU-style embedding

3.1 The inventory of embedded clauses

In complement position: infinitive and participles.¹

- (1) Mon lidžiški-ni jarti-ško
I read-INF like-1SG
I like reading. (Winkler 2001: 56) infinitive
- (2) Voz'ma [so-les' lykt-em-ze].
wait.pst.1sg s/he-abl arrive-m-Px3sg.acc
I was waiting for his/her arriving. perfect / passive -m participle

In adjunct position: 5/6 gerunds (Winkler 2001: adverbs of manner, cause, and temporal relations) "one of them is identical with a participle, another two are inflected participles"; they can be "part of a converb structure" (Winkler 2001: 59).

- (3) Mon so-je [bakča-je mini-ku-(m)] adž-i
I s/he-ACC garden-ILL go-GER-1SG see-1SG
Going into my garden I saw him/her. (Winkler 2001: 61)

In attributive position (relative clauses): participles that are prenominal, non-finite, gap strategy (see later).

Commonly accepted claim: Proto-Uralic didn't have finite embedding (Collinder 1960).

We think that the claim that Proto-Uralic had no finite embedding is problematic:

- we are not aware of any modern languages that have absolutely no finite embedding
- finite clauses appear in the first texts, too

- (4) Todämed-kä potä, [jued-n'an'ed tuä
know.PRT.2SG-if come.out.3SG grain.2SG this.year
udaltoz-a ...]
mature.FUT.3SG-POL
If you'd like to know whether your grain will mature or not ... (Munkácsy 1887)

- it would be theoretically problematic to exclude finite embedding from the grammar of a language because
- one would have to say that such a language does not choose Finite embedded C from the inventory provided by UG
- finite embedded C would have to be different from finite matrix C (this is not so problematic)

¹On non-finite forms, see also Winkler (2001) and Georgieva (2012).

- another logical possibility is that the language chooses finite embedded C from UG's pool, but no verbs or other matrix predicates subcategorize for it → not how we want to do our syntax + still can't rule out embedded finite adjunct clauses and relative clauses (which are not selected in our analysis)

3.2 Is there a CP domain in FU style embedded clauses, and if so, what is there?

3.2.1 Elements that usually inhabit the CP-domain

Complementizer: not found in the early texts (and Collinder 1960 claims that it is not possible to reconstruct complementizers in Proto-Uralic).

Relative pronoun: not found in the early texts (and typologically absent from pre-nominal relatives anyway).

Topics, foci: (mostly) in the higher TP-zone!

- (5) Zhal'asa verano, Sasha_{Top} VerajeZ_{Foc} jarate
 regrettably Sasha Vera.ACC love.3SG
 Regrettably, it is Vera whom Sasha loves.

the fact that some adverbs (those marked with *) have no direct Udmurt equivalents complicates things ...²

- (6) Mood_{speech act} **frankly, *honestly, *sincerely*
 Mood_{evaluative} **fortunately, *luckily, *oddly, *regrettably*
 Mood_{evidential} *allegedly, reportedly, obviously, evidently*
 Mod_{epistemic} *probably, likely, supposedly, presumably*
 T(Past) *once*

3.2.2 Clause size

For infinitives, it is standard to think that they are CPs; the few finite embedded clauses are also CPs.

Participles are typically nominalized (except when they function as relatives or predicates) → no reason to think that they have a CP.

Gerunds: not clear at this point what kinds of elements really belong here → we have nothing to say about them, incl. their size.

²These are expressed as converbial clauses containing the adverb.

4 A closer look at *-m* clauses

4.1 The data

nominalizer:

- (7) uža-m, kul-em
work_V-m die-m
work_N, death/dead person (Winkler 2001: 58)

prenominal relative:

- (8) ([Kylem aryn [pes'atajen pukt-em] korka dzhuaz.
last year.INE grandfather.INS build-m house burn.PST.3SG
The house that was built by grandfather burned down last year.
Or: The house that was built by grandfather last year has burned down.

subject: Gen subject & Px

- (9) Mone [gondry-len lykt-em-ez] kajgyriz
I.ACC bear-GEN arrival-m-PX3SG frighten.PST.3SG
The bear's arrival frightened me.

as complement of an oblique case: Gen subject & Px³

- (10) Mon shumpoti [dyshetis'jos-len Petyr-ez kuz'mas'ke-m-zy-ly]
I was.happy.1SG teacher.PL-GEN Peter-ACC present.give-m-PX3PL-DAT
I was happy that the teachers gave a present to Peter.
- (11) Mon [gondyrlen dzhog Mashajez s'ie-m-ez-les'] kurdaj.
I bear-GEN quick(ly) Masha-ACC eat-m-PX3SG-ABL frighten.PST.1SG
The bear's quick(ly) eating Masha frightened me. (Lit. I frightened from ...)

as complement of P: Gen subject & Px

- (12) Mon [[gondyr-len Mashajez s'ie-m-ez] bere] byz'ysa koshki
I bear-GEN Masha-ACC eat-m-PX3SG after away run.PST.3SG
I ran away after the bear's eating Masha.

object: Abl subject & Px

- (13) Ton adžid [gondyrjos-leš Masha-jez s'ie-m-zes]
you see.PST.2SG bear.PL-ABL Masha-ACC eat-m-3PL.ACC
You saw the bear's eating Masha.

The Abl on the subject recalls possessive structures: possessors are normally in the Genitive; but they must be Ablative when the possessed DP bears Accusative case (Csúcs

³Winkler (2001) lists the following as a different, gerundival use; we think that this is the same type as (11)

- (i) [više-m-en-im] ta už-ez e-j lešti
be.ill-m-INS-1SG Dem work-ACC NV-1SG do
Because of my illness I didn't do this work. (Winkler 2001: 79)

1998, Winkler 2001, Edygarova 2009, Assmann et al. 2014)

- (14) [so-len/*leš anaj-ez] siče ug dišaški
he-GEN/ABL mother-3SG such dress NEG.PRES.3
His mother does not dress in such a way. (Edygarova 2009)
- (15) [so-*len/leš eš-s-e] ažži-ško
he-GEN/ABL friend-3SG-ACC see-PRES.1SG
I see his friend. (Edygarova 2009)

Generalization:

- *-m* has an adjunct subject (in Instrumental case) and no Px in attributive position (i.e. as a relative)
- *-m* has a Genitive subject and Px in characteristic NP environments (argument position and complement of P) (modulo the Ablative subject in object position)

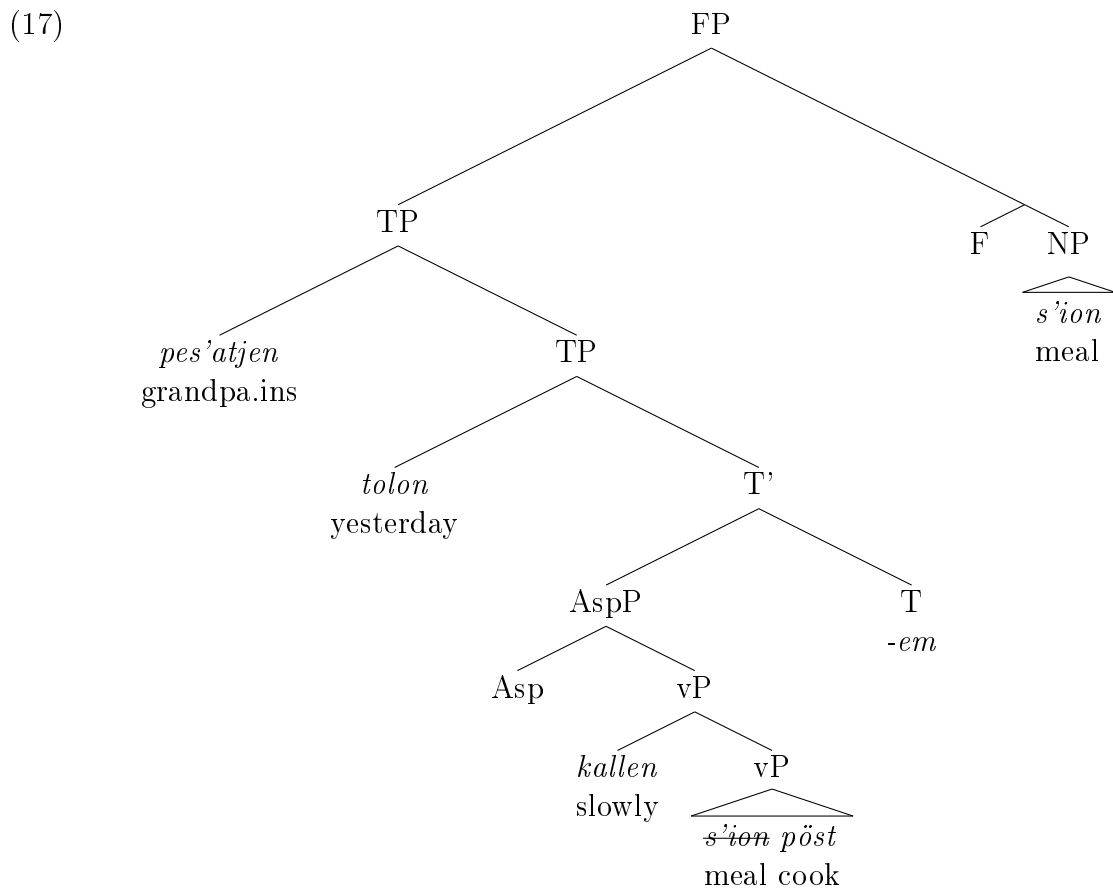
4.2 Analysis

Proposal:⁴

- *-m* is not a true nominalizer itself (in spite of what (9) through (27) might suggest)
- *-m* spells out a verbal projection in the clause; possibly non-finite T
- accepting Cinque's 1999 hierarchy, the possibility of the adverb *last year* points to the presence of at least T_{past}
- participles have semantic tense (past, present, future), though not tense suffixes, which would find a natural place in T
- as a truncated clause it can function as an RC without further ado
- as the RC use shows, as a non-finite form *-m* cannot case-license its subject; the subject appears as an adjunct (we take Ins to roughly correspond to a *by*-phrase; some speakers accept Ins marking on the agent in the passive)
- we take the matching approach to RCs here (see also alter); if there was an operator, it would have to move to the left edge of the RC, but we don't think they are of size CP
- as prenominal RCs never have a relative pronoun, it is possible that they are always derived via matching
- relative structure; introduced in the spec of a nominal FP

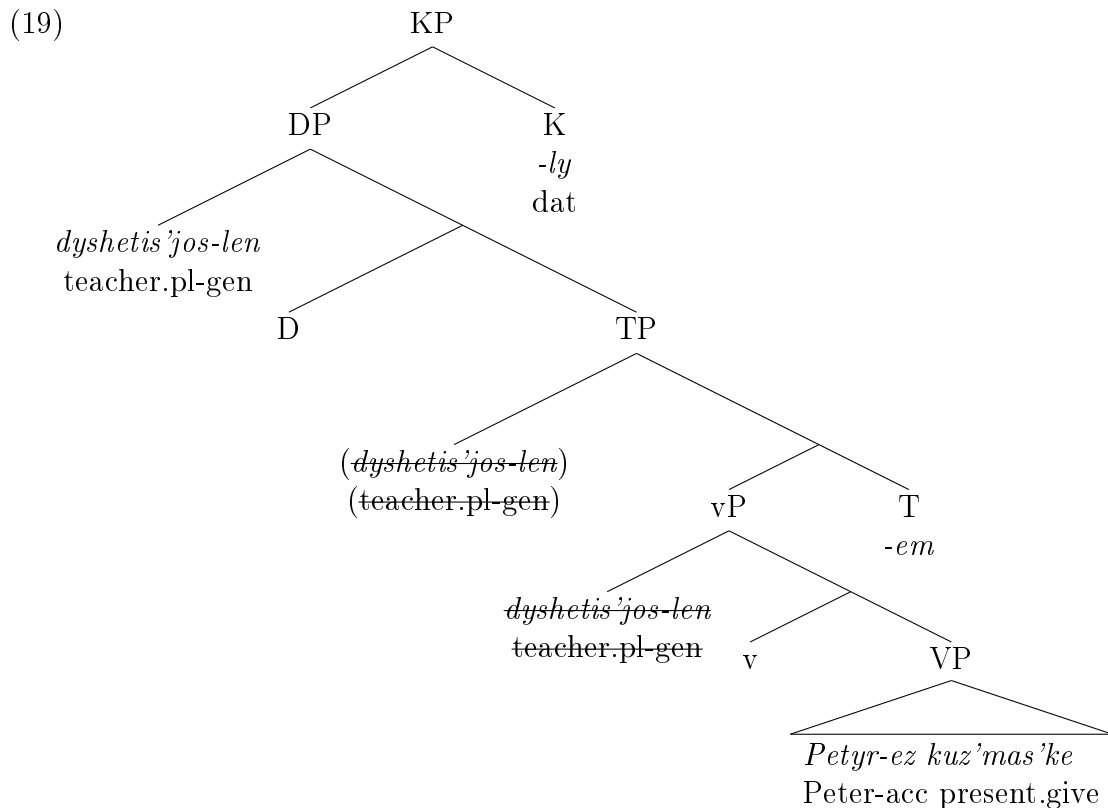
⁴This section owes a lot to Baker's (2011) analysis of Sakha.

- (16) Sasha [pes'atajen tolon kallen pöst-em] s'ion jarate
 Sasha grandfather.INS yesterday slowly cook-m meal like
 Sasha likes the meal that grandfather slowly cooked yesterday



- in order to appear in nominal positions, it has to be "nominalized"
- this is done by embedding it under a nouny head, which we identify as D (recall that it's an articleless language → no real nominalizer (*n*) is present in the structure)
- D can case-license a subject with the prototypical possessive case, Genitive, so the extended vP's subject raises here
- this is a mixed-projections approach along the lines of Borsley & Kornfilt (2000), Alexiadou (2005), Alexiadou et al. (2011), Alexiadou (2013), Alexiadou et al. (2013), Panagiotidis & Grohmann (2009), Baker (2011)
- structure in argument position (CENs in Grimshaw's 1990 sense)

- (18) Mon shumpoti [dyshetis'jos-len Petyr-ez
 I was.happy.1SG teacher.PL-GEN Peter-ACC
 kuz'mas'ke-m-zy-ly]
 present.give-m-PX3PL-DAT
 I was happy that the teachers gave a present to Peter.



NB: we did not represent the Px morpheme in (19). Baker (2011) argues that in Sakha the Px is on the empty D head. This would work in the above example. However, the position of Px depends on which case we are talking about. This is an issue with possessive DPs in general; we have nothing to say on this at this point.

- (20)
- a. N-Px-case: Accusative,⁵ Genitive, Dative, Ablative (source), Caritive (without, -less), Approximative (in the direction of), Adverbial (according to)
 - b. N-case-Px: Instrumental, Inessive (in), Illative (into), Elative (starting point), Transitive (along, through), Egressive (starting point, place across which motion is continued)
 - c. free order: Terminative (aim/destination of action)

Note that in Hungarian, an article language, the possessive agreement suffix is definitely lower than (immediately below) D → some Poss node might be required bw D and T in Udmurt, too.

⁵According to the intuition of contemporary speakers, Px and Acc have fused together into a single portmanteau.

4.3 Further support for aspects of our proposal

Above we suggested that the structure of *-m* relatives and *-m* arguments is the same (modulo the nominal projections above TP). We've seen that *-m* relatives can accommodate adverbs (16). If we are right, that i) the structure is the same and ii) there is no nominalizer in *-m* arguments, then we expect *-m* arguments to accommodate adverbs but not adjectives. This seems to be borne out:⁶

- (21) Mon [gondyr-les Masha-jez dzhog s'ie-m-ze] adz'i.
 I bear-ABL Masha-ACC quickly eat-m-PX3SG.ACC see-PST.1SG
 I saw the bear's quickly(?) eating Masha.

The lack of a nominalizer also predicts that *-m* arguments cannot be pluralized, which again seems to be borne out.

- (22) *[Kyshnomurt-len kes'k-em-jos-yzly] kartež pushtytizy.
 wife-GEN shout-m-PL-PX3SG.DAT husband.PX3SG.ACC anger.PST.3PL
 The wife's shoutings angered the husband.

Corrections of (22) by speakers have no plural:

- (23) [Kyshnomyrt-len kes'as'k-em-ez] kartse pushtytiz.
 wife-GEN shout-m-PX3SG husband.PX3SG.ACC anger.PST.3SG
 Lit: The wife's shouting angered her husband.

- (24) [Kyshnoez-len kes'as'k-em-ez-ly] kartež pushtyliz
 wife.DAT-GEN shout-m-PX3SG-DAT husband.PX3SG get.anger.PST.3SG
 The wife's shouting made her husband angry.

We argued that *-m* cannot case-mark its subject; if the subject is present, it has to raise to spec, DP where it gets Genitive, like in a possessive structure. Recall that possessors bear Ablative if the possessed DP bears Accusative.

- (25) [so-len/*leš anaj-ez] siče ug dišaški
 he-GEN/ABL mother-3SG such dress NEG.PRES.3
 His mother does not dress in such a way. (Edygarova 2009)
- (26) [so-*len/leš eš-s-e] ažži-ško
 he-GEN/ABL friend-3SG-ACC see-PRES.1SG
 I see his friend. (Edygarova 2009)

-m clauses in object position also have Ablative on the subject; which we take to be clear evidence for subject raising to spec, DP

- (27) Ton adžid [gondyrjos-leš Masha-jez s'ie-m-zes]
 you see.PST.2SG bear.PL-ABL Masha-ACC eat-m-3PL.ACC
 You saw the bear's eating Masha.

NB: one informant does not require Ablative here:

⁶Note that *dzhog* means both quick and quickly, but its position after the object makes us think that it's an adverb here. Our test sentences with adjectives failed for independent reasons.

- (28) Vozhma [so-len lykt-em-ze]
 wait.PST.1SG s/he-GEN arrive-m-PX3SG.ACC
 I was waiting for his/her arriving.

We suggest that she has an alternative structure available, where *-m* can case-mark its subject, after all, hence it does not have to raise to spec, DP. Alternatively, perhaps she allows Gen on the possessor in Acc-marked possessive structures, too → to be checked

4.4 A loose end

We said that *-m* is not a nominalizer. What's going on here?

- (29) uža-m, kul-em
 work_V-m die-m
 work_N, death/dead person (Winkler 2001: 58)

Tentative proposal: i) these could be lexicalized forms or ii) the same *-m* as above where the base *V* has no argument structure and the same silent *D* on top. Assuming a homophonous *-m* would be last resort.

4.5 Some consequences for the label TP

If we are right that these clauses are TPs, then their use in the relative position shows that TP can happily label its own projection; no feature inheritance from C(P) is necessary.

NB: Chomsky has always taken IP/TP to be defective in some way, a position that we don't see supported, esp. not in the POP extensions fashion (Chomsky 2015).

5 The emergence of non-split CP

Major changes happen in the 19th century:

OV order becomes looser.

- (30) Ad'ami ara-m éabej-ze
 man harvest-PST.3SG wheat-3SG.ACC
 The man harvested his wheat. (Wichman 1901)

Finite embedding gradually appears / gains ground.

- (31) Todämed-kä potä, [jued-n'an'ed tuä udaltoz-a,
 know.PRT.2SG-IF come.out.3SG grain.2SG this.year mature.FUT.3SG-POL
 uz-a: ...]
 NEG.FUT.3SG-POL
 If you'd like to know whether your grain will mature or not ... (Munkácsy 1887)

→ We take finite clauses to have a CP layer; (31) shows that the category CP appears in embedded clauses beyond infinitives.

The general complementizer *shuysa* ‘that’ appears, with this overt material appears in the CP.

(32) Mon malpas’ko, ton bertod (shuysa)
 I think.1SG you go.home.2SG that
 I think that you will go home.

- clause-final position, in line with the general head-last character of the language
- grammaticalized from the converbial form of *shuyny* ‘say’

(33) pervoi pãues-murt "monε mimãua urom ta·zi kariz" šuusa
 first forest.spirit I.ACC last work thus do.PST.2SG say.PRT
 veram
 say.IIPST.3SG
 The first forest spirit said saying: "the last work did this to me". (Wichman 1901)

The reanalysis was facilitated by the emergence of OV order:

(34) juaní kutiskilla: "tonε kiń taží kariz?" šuisa
 ask.INF start.FREQ.3SG you.ACC who like do.PST.3SG say.PRT
 starts to ask, saying: who did this to you? (Wichman 1901)

- report verbs in OV languages often grammaticalize into C elements (see Mathew 2009 for Malayalam and Baker 2011 for Sakha)
- this is a case of Van Gelderen’s (2009) Verbal Cycle (a V lexical item is reanalyzed as a C lexical item)

At the same time, no case in which two different projections are filled out overtly in the CP-domain

→ we still don’t have evidence for a split CP at this stage

Relevant question for labels: what does it mean for a language not to have split CP?

- Force and Fin features bundle on a single C head, really just one C is projected
- 2 C heads all the way, just no phonological reflex

In Udmurt, we see that first the two C heads are filled in, only then can speakers start using the TopicP in between them → is such a phonologically overt signaling of the edges of the CP always necessary for the in between positions to be filled?

6 The emergence of split CP in complement clauses

20th century: more intensive contact with Russian, more contact phenomena appear

6.1 Declaratives

Russian complementizer *shto* ‘that’

- (35) Ja dumaju, **čto** Ivan smotrit televizor.
 I think that Ivan watches TV
 I think that Ivan is watching/watches TV (Bailyn 2012: 84) Russian

Udmurt borrows this C; it can co-occur with *shuysa* (see also Kaysina 2013, Tánczos 2013)

- (36) Mon malpas'ko [(**shto**) ton bertod (**shuysa**)]
 1SG think.1SG that(Russ.) 2SG come.home.FUT.2SG that(Udm.)
 I think that you will come home. Udmurt

Proposal: at this stage we have evidence for embedded split-CP; *shto* is in Force and *shuysa* is in Fin (Tánczos 2014)

- (37)
- ```

 graph TD
 ForceP --> Force[shto]
 ForceP --> FinP
 FinP --> TP
 FinP --> Fin[shuysa]

```

Argument 1: the two Cs have a slightly different distribution (e.g. embedded questions admit only *shuysa* but not *shto*); the co-occurrence of the two Cs is subject to the same constraints as the occurrence of *shto* on its own

Argument 2: topics cannot precede Russ. *shto* ‘that’

- (38) \*Mon oskis'ko, [**ta tynad kn'igade**, **shto** soos dunjasalzi]  
 1SG believe.1SG this your book.2SG.ACC that 3PL appreciate.COND.3SG  
 I believe that they would appreciate your book.

Additional support 1: (37) conforms to Biberauer et al's (2014) observation that during an OV to VO shift, the parametric change in headedness starts with the highest layer in the clause

Additional support 2: this is a FOFC-compliant structure; if *shuysa* was in Force and *shto* in Fin, it would not be FOFC-compliant

- (39) wrong structure
- ```

      graph TD
      ForceP[*ForceP] --> FinP
      ForceP --> Force[shuysa]
      FinP --> Fin[shto]
      FinP --> TP
    
```

6.2 Conditionals

Udmurt ‘if’

- (40) silal sištíd **ke**, kereton luoz
salt(.ACC) spill.PRET.2SG if quarrell be.FUT.3SG
If someone spills salt, there will be quarrel. (Winkler 2001: 74)

Russian ‘if’

- (41) **Esli** by ja znal, ja by tebe pozvonil.
if COND I knew I COND you phoned
If I knew I would phone you. / If I had known I would have phoned you. (Bailyn 2012: 88)

Double complementizer structure

- (42) **Jesli** kuiń ad’ami koškiz **ke**, (kuiń ad’ami kak raz prinjat’ karo.)
if three person go.PST.3SG if three person exactly admit AUX.FUT.1SG
If three persons go, I will admit exactly three persons. (Kaysina 2013)

7 The emergence of split CP in finite relatives

7.1 Original RCs

original relatives: prenominal, non-finite, gap strategy (Winkler 2001)

- (43) Sasha [pes’atajen tolon kallen pöst-em] s’ion jarate
Sasha grandfather.INS yesterday slowly cook-m meal like
Sasha likes the meal that grandfather slowly cooked yesterday
- (44) [Kük nunal zorü-š’] zor gültiz š’erüs’ez
two day fall-prt rain destroy.PST road.ACC
The rain that has been falling for 2 days destroyed the road. (Belyaev 2012)
- (45) mon [so-les’ lidž-ono] kńiga-z-e adž-i
I he-abl read-prt book-3sg-acc see-1sg
I saw the book which must be read by him. (Winkler 2001: 77)

This fits with typological generalizations about prenominal RCs:

- are non-finite with a few exceptions; it is common for N-initial relatives to be finite (Keenan 1985, see de Vries 2002 for examples of postnominal participial relatives)
- feature no relative pronouns (Downing 1978, de Vries 2002, Kayne 1994)
- have no initial complementizer (Downing 1978, de Vries 2002)
- never feature a clause-final relative particle that is identical to the garden variety C of sentential complementation (Downing 1978, de Vries 2002, Kayne 1994)

Proposal: these RCs are not bigger than TP; the lack of CP accounts for the absence of a relative pronoun or complementizer.

NB: Kayne (1994) also argues that prenominal RCs are TPs/IPs, but he derives them from a post-nominal CP-structure, a view that we do not subscribe to.

(46) [TP] [DP D [CP head (rel. pronoun) C t_{TP}]]]

7.2 Postnominal non-finite RCs

Placing the original RC into postnominal position is out

(47) *korkan [pes'atajen pukt-em]
 house.INE grandfather.INS build-m
 in the house built by grandfather

Except: *-ono* non-finites can form post-nominal RCs iff supplemented with a relative pronoun. *-ono* expresses the necessity of carrying out an action; Winkler (2001) classifies it as a present passive participle. It can be decomposed into two morphemes: a "nominalizer" *-on* and *-o* (Csúcs 2005).

(48) [so-len lidz-**ono**] kníga
 s/he-GEN read-PRT book
 the book which must be read by him/her (Winkler 2001: 58)

(49) So korkan ik ul-i, [kytyn lu-**ono** mynym]
 he house.INE same live-PST.3SG where be-PRT I.DAT
 He lived in the same house, where I have to live.

Relative pronouns are form-identical to *wh*-pronouns; this is common among languages with relative pronouns (Hopper & Traugott 1993, Heine & Kuteva 2002, Van Gelderen 2004; 2009).

(50) **Kytyn** so ul-i?
 where s/he live-PST.3SG
 Where did (s)he live?

Relative pronouns may later grammaticalize into relative Cs and later into higher C heads (Van Gelderen's 2004 Relative Cycle), but this has not happened yet:

(51) korkan [mar shöryn kvala pukt-ono tynyd]
 house.INE what behind holy.house build-PRT you.DAT
 in the house behind which you have to build the holy house.⁷

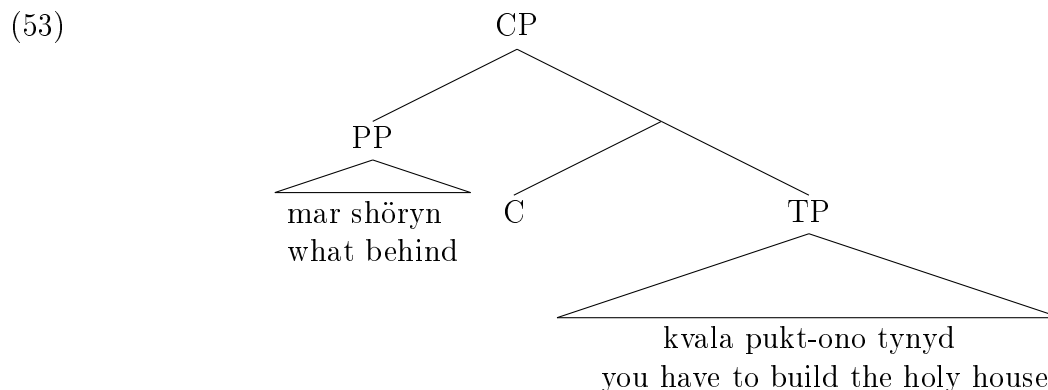
Proposal:

- the *wh*-based relative operator appears here because post-nominal RCs have a left periphery, i.e. they project a CP layer
- when the CP layer is present in RCs, there is a need to overtly mark clause-typing
- in absence of relative complementizers, clause-typing is taken care of by a relative operator in spec, CP

⁷Note that there is a covert copula in the relative clause. It becomes overt in the past tense.

Potential support for clause size: Winkler (2001) gives an example with *shuisa* ‘that’ in the RC, but we have not been able to confirm this with our informants.

- (52) soku todem iñi [kin-e šot-**ono** šuisa]
 then know.PERF/3PL already who-ACC give back-PRT that
 At this time he already knew who would be given (as wife) (Winkler 2001: 75)



NB: at this point we do not have evidence for split CP in RCs, so we do not have to ask if relative pronouns are in spec, ForceP or spec, FinP

7.3 Finite RCs

Postnominal RCs with a relative pronoun may now also be finite; they obligatorily have the relative pronoun (but no C)

- (54) pinalez [kudze Sasha uramish adziz]
 child.ACC which.ACC Sasha street.ABL see.PST.3SG
 the child that Sasha saw on the street

Proposal: this is because finite clauses always have CP; that CP must have overt material to mark clause typing

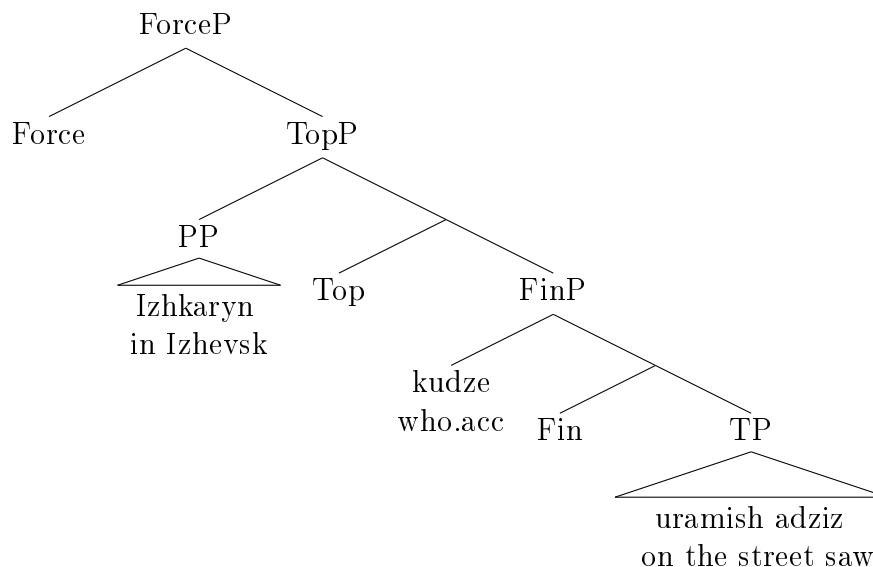
Finite clauses also allow topicalization above the relative pronoun:

- (55) pinalez, [Izhkaryn kudiz Sashajez uramish adziz]
 child.ACC Izhevsk.INE which Sasha.ACC street.ABL see.PST.3SG
 the child that saw Sasha in Izhevsk framing adverb topic
- (56) pinalez, [ta kishnomurt kudze uramish adziz]
 child.ACC this woman who.ACC street.ABL see.PST.3SG
 the child that this woman saw on the street subject topic

NB: framing adverbs topics were judged to be slightly better than subject topics (on a 5-point Likert scale, 5 and 4 respectively). We think this has to do with the fact that the framing adverb can be base-generated in topic position but the subject has to be moved there.

Proposal: this is evidence for the appearance of split CP; the relative pronoun is in spec, FinP and speakers can now use the TopP in the C-field

(57)



NB: studying Italian, Rizzi claims that relative pronouns are in spec, ForceP. This cannot be the case in Udmurt, but that does not mean that our data are not compatible with Rizzi's hierarchy (Force > Top > Int > Top > Foc > Top > Fin > TP). All we claim is that the position of relative pronouns is subject to variation (they are in spec, FinP in (Old) Hungarian, too).

7.4 Consequences for the analysis of relative clauses

2 big analyses for RCs with overt relative pronouns: matching vs raising

Udmurt data relevant here repeated:

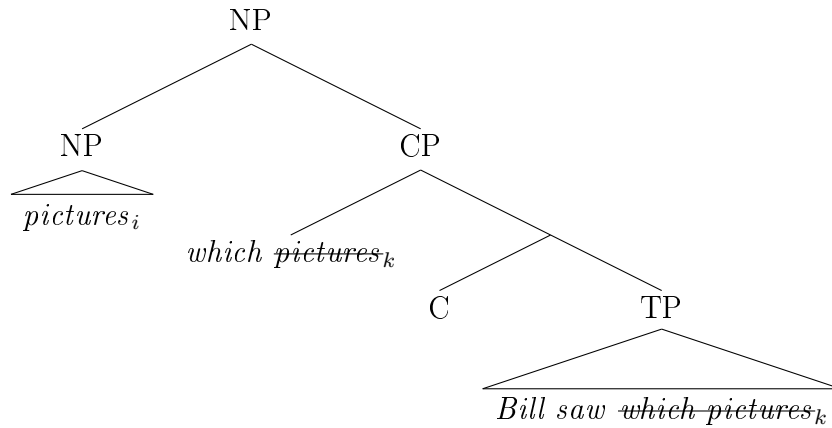
(58) pinalez, [Izhkaryn kudiz Sasha.jez uramish adziz]
child.ACC Izhevsk.INE which Sasha.ACC street.ABL see.PST.3SG
the child that saw Sasha in Izhevsk framing adverb topic

(59) pinalez, [ta kishnomurt kudze uramish adziz]
child.ACC this woman who.ACC street.ABL see.PST.3SG
the child that this woman saw on the street subject topic

Matching:

- Chomsky (1980), Gračanin-Yukseš (2008), among others
- the head originates outside of the RC
- the RC features movement of a full head that is deleted under identity with the external head

(60)

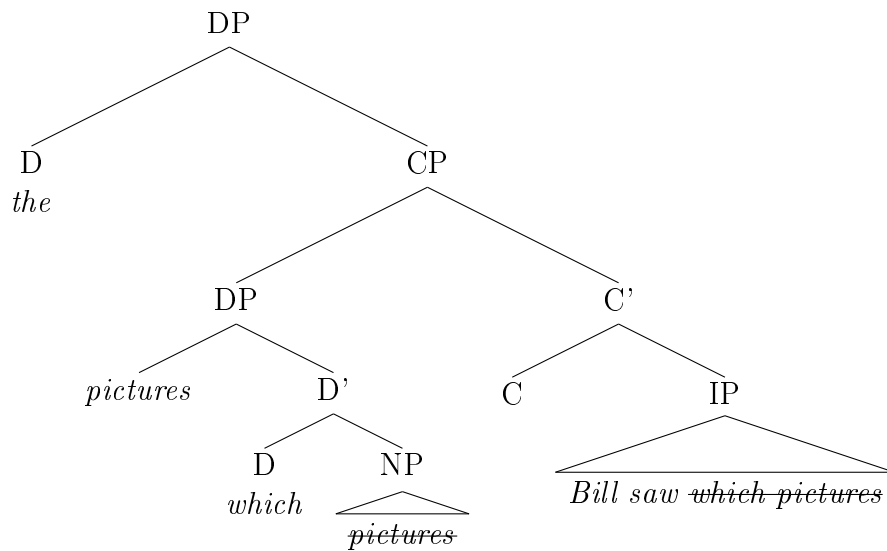


⇒ compatible with (58) and (59) as long as the relative pronoun is lower than the topic

Raising:

- Vergnaud (1974), Bianchi (1999), Alexiadou et al. (2000), de Vries (2002), Citko (2004), Erlewine & Gould (2016), among others
 - the head originates inside the RC
 - it is moved to the left periphery of the RC
- Kayne (1994): i) the relative pronoun is in D, the head of RC is merged as its complement, ii) the head of RC moves so spec, DP iii) DP moves to spec, CP

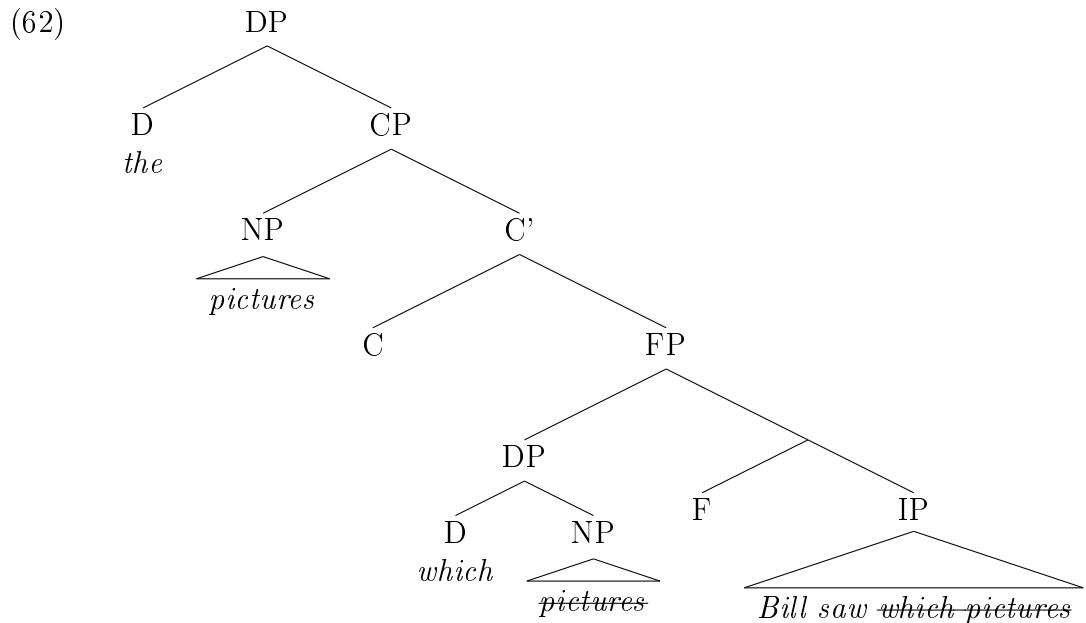
(61)



⇒ NOT compatible with (58) and (59)

note that Kayne suggests that this is the structure underlying RCs across languages and RC types (IHRC, EHRC, prenominal, postnominal); this is refuted by the Udmurt data

- Bianchi (2000), Zwart (2000): i) the relative pronoun is in D, the head of RC is merged as its complement, ii) DP moves to a specifier below CP iii) the head moves on to spec, CP and strands the relative pronoun



⇒ compatible with (58) and (59) as long as the the topic is below the raised head but higher than the relative pronoun

+1: both matching and raisign are necessary (Bhatt 2002, Szczegielniak 2004, Krapova 2010, Gračanin-Yukse 2013, Cinque 2008; 2015, Deal to appear), among others

8 Final remarks

We argued that

- *-m* participles in complement position are just TPs
- to the extent that this is right, TP is able to label its own projection
- CP is present in late 19th century Udmurt, but only in infinitives and finite complements
- at this stage it is a non-split CP
- in the 20th century finite complement clauses develop a split CP
- then finite relatives also do so
- Udmurt shows that the head of RC and the relative pronoun do not form a constituent, contra Kayne (1994)

9 Appendix: topic and focus position in Hungarian

Topics and foci are in the higher TP-zone in Hungarian as well (É. Kiss 2002, Bacskai-Atkari 2014):

Relative pronouns

- (63) a. Mary bought more cats
b. *mint* [ahány macskát] Péter látott.
than rel.how.many cat.ACC Peter see.PST.3SG
than Peter saw. (Bacskai-Atkari 2014: 260)

- comparative complementizer *mint* ‘than’ in Force
- relative expression *ahány macskát* ‘rel.how.may cat.acc’ in spec, FinP⁸
- In Old Hungarian *hogy* ‘that’ and *ha* ‘if’ could also occur in (non-comparative) relatives, and these Cs, too, preceded relative pronouns (data from (Bacskai-Atkari & Dékány 2015):

- (64) *tyzen keth themen angyalth* [hogy *kyk engem megh*
teen- two stern angel.ACC that who.PL I.ACC particle
oltalmaznanak
protect.COND.3PL
twelve stern angels who would protect me (Apor Codex 167, late 15th to early 16th c.)

- (65) [*ha kyket erewjben zerettem*] *azoktol hamaraban meg*
if who.PL.ACC more love.PST.3SG those.from sooner particle
vtaltattam
hate.PASS.PST.1SG
those that I loved most hated me the soonest (Jókai Codex 154, translated cca 1370, remaining copy from cca 1440)

Topic

relative > topic

- (66) a. Mary bought more cats
b. *mint* [ahány macskát] Péter látott.
than rel.how.many cat.ACC Peter see.PST.3SG
than Peter saw. (Bacskai-Atkari 2014: 260)

*topic > relative

- (67) a. *a fiú (*Péter) akit Péter látott*
the boy Peter who.ACC see.PST.3SG
the boy that Peter saw

⁸Bacskai-Atkari (2014) uses two CP labels rather than Force and Fin.

- b. a fiú (*Pétert) (*tegnap) aki Pétert tegnap
 the boy Peter.ACC yesterday who Peter.ACC yesterday
 megütötte
 particle.hit.PST.3SG
 the boy that hit Peter yesterday

- the topic *Péter* follows both the complementizer and the relative element

Focus

- (68) a. Mary saw more cats
 b. mint ahány macskát Péter látott meg
 than rel.how.many cat.ACC Peter see.PST.3SG particle
 than Peter noticed (Bacsikai-Atkari 2014: 258)

- that *Péter* is focused is unambiguously marked by the verb-particle order
- it follows the complementizer as well as the relative element
- a topic like *tegnap* ‘yesterday’ could intervene bw. the relative constituent and the focus *Péter*

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