

Sentence-final conjunctions in Bartangi (and Ossetic): “reverse insubordination” or “incoordination”?

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(supported by RSF grant no. 24-18-00199

“Clause structure and positional phenomena in SOV languages”)

Workshop on Minor Sentence Types, HPSG25, 4 September 2025

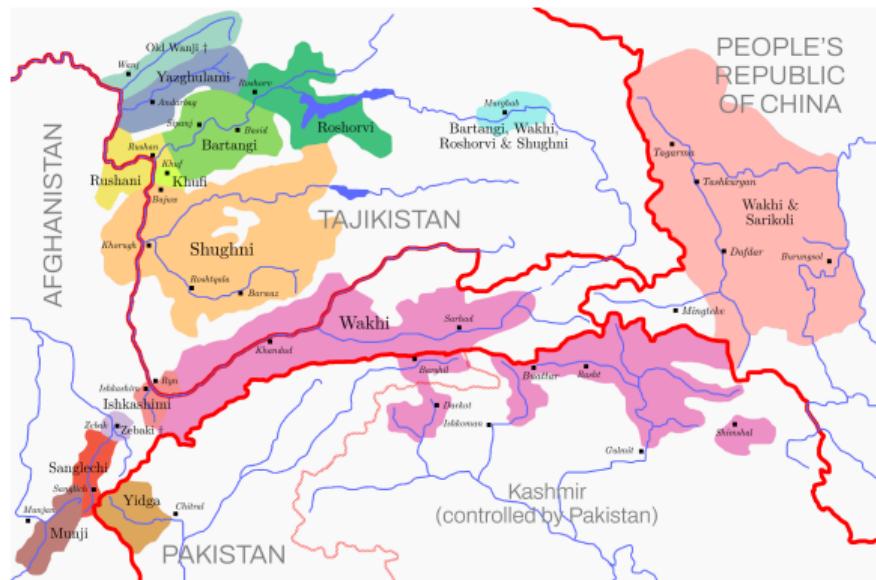
Overview

- Like other Iranian languages, Bartangi (SE Iranian) and Ossetic (NE Iranian) are described as lacking a developed clause-final area
- I show that in both languages, elements traditionally analyzed as clause-initial or interclausal conjunctions – *di* ‘that’ and *xu* ‘and’ in Bartangi, *æmæ* ‘and’ in Ossetic – have developed properties that are more akin to sentence-final particles or clause-final subordinators.
- For *di* ‘that’, this may be due to a process that can be called “reverse insubordination”, where the subordinator is analyzed as a final particle in the *main* clause due to its enclitic status.
- For *xu* and *æmæ* ‘and’, we have to speak of “incoordination”, as it were, or as the reanalysis of a coordinator as a final subordinator, again due to its enclitic status.
- I will discuss how such elements are to be represented in clause structure, in LFG terms.

General information

Bartangi

- A Shughni-Roshani language spoken in the Bartang river valley, Mountainous Badakhshan Autonomous Oblast, Tajikistan.
- 5500 speakers according to the 1989 census.
- SOV basic word order, left-branching NP.
- The study is based on published texts (Sokolova 1960; Karamxudoev 1973; Šakarmamadov 2005) and data collected in 2023–2024 in Basid, Rushan district, GBAO.

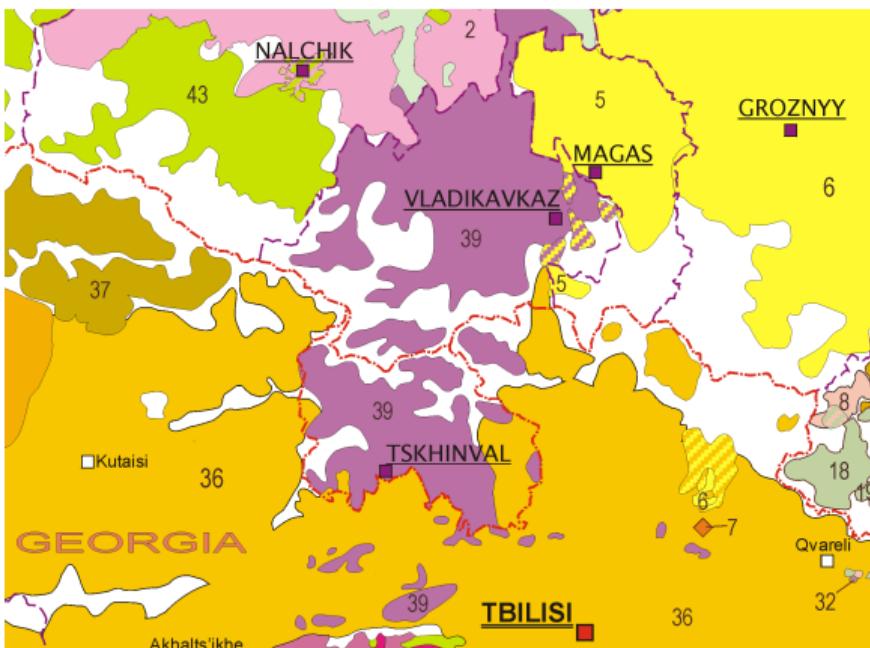


Map © Yuri Koryakov, Maxim Melenchenko.

General information

Ossetic

- Another Eastern Iranian language, spoken at the other extreme of the Iranian-speaking areas: in the Caucasus (North Ossetia in Russia, South Ossetia in Transcaucasia)
- Around 500 000 speakers.
- SOV basic word order, left-branching NP.
- The study is based on the Ossetic National Corpus (<https://corpus.ossetic-studies.org/>) and elicitation.



Map © Yuri Koryakov.

Conjunctions

Inventory

- Clause-internal subordinators:

ca general subordinator with a very wide range of functions (see Clint Parker's talk)

di_{IN} temporal, future conditional conditional-causal ('since')

- Clause-initial subordinators:

di_{EX} complement, result, purpose, relative, ...

lāk 'let' (purposive, optional; also a jussive marker)

Tajik loans *agar* 'if', *to* 'until', 'while', 'as soon as' (with following *at* 'and')

- ▶ these seem to "float" between three positions: clause-initial, second and preverbal (cf. Ossetic, Belyaev 2014)
- ▶ won't be discussed here, but *to* has grammaticalized to a large extent, while *agar* simply doubles *ca* or *di_{IN}* and is always optional

- Coordinating conjunctions:

at general coordinator

xu sequence of events

The status of *di*

- In Bartangi, there are two conjunctions with identical form (*i*)*di* but distinct positional properties.
- *di_{IN}* is either a proclitic (when preverbal) or an enclitic (when in second position):

(1) *tū =t <di māš-ri bazaygarak <di dāčūg, māš=tí xoš sān*
 thou.NOM=2SG SUBD we-DAT toy SUBD give.PST we =FUT happy go.PRS:1SG
 ‘When you give us toys, we are happy.’

- *di_{EX}* always stands between the two clauses and is an enclitic to the preceding clause (MAIN =*di* SUB):

(2) *mūysafed xu-r fikri kižt di, (580ms) agar áz sām mun nabos rast*
 old_man self-DAT thought do.PRS:3SG LNK if I.NOM go.PRS:1SG I.OBL grandson
 remain.PRS:3SG
 ‘The old man thinks: if I go, my grandson will remain.’

{anoyatsho_jonali_almasti1_200624}

Clause-external *di*

Core functions

- *di* is traditionally described as a clause-initial subordinator marking complement, purpose and “result” clauses.
- Importantly, *di_{EX}* is always optional!

(3) complement

yā *fikri* čūg *di*, *asal* *pa* *diraxt*
D3.SG.NOM thought do.PST LNK honey LOC.SUPER tree
‘He thought that honey was on the tree.’

(4) purpose

āz=um az xu *bajoy* čūg *di* (*lāk*) az *mun* mā *wīn-an*
I.NOM=1SG OBJ self hidden do.PST LNK JUS OBJ I.OBL PROH see.PRS-3PL
‘I hid so that they wouldn’t see me.’

- (5) result
xil-ak=an pa wī nāst di, yā mis piðo sut
many-DIM=1PL LOC.UP D3.M.OBL sit.PST.PL LNK D3.SG.NOM ADD visible go.PST.M
‘We waited for a while, and he appeared.’ (Karamxudoev 1973, 276)

(6) manner
ik-dond azob az tā kin-um idi, tū mir-i
EMPH-so.much pain OBJ thou.OBL do.PRS-1SG LNK thou.NOM die.PRS-2SG
‘I will beat you up so much that you will die.’ (Sipanj, Sokolova 1960, 102)

- *di_{EX}* is also used to introduce non-specific right-extraposed relative clauses:

(7) *ar basid ik-das odam nist di, (yā) darborayi zarabīn na fām-t*
 LOC.DOWN B. EMPH-such person EXST.NEG LNK D3.SG.NOM about Z. NEG
 know.PRS-3SG

'There is no such person in Basid who does not know about Zarubin.'

- But with *ca* it can also be used with specific RCs, although such examples are very rare:

(8) *sawd tar wī j̥oy di, wī xowand =i ni̥xon ca δod*
 go.PRS:3SG LOC.EQ D3.M.OBL place LNK D3.M.OBL master=3SG sign SUBD give.PST
 'He went to the place his master showed him.' (Sokolova 1960, 48)

- Occasionally used with temporal head nouns, like in Persian *vaqt-i ke* etc.:

(9) *waxt di k-ar um dāxt daromad ki̥xt, čāst di...*
 time LNK EMPH-LOC.DOWN D3.F.OBL steppe coming do.PRS:3SG look.PRS:3SG LNK
 'When he comes out into the steppe, he looks and...' (Sokolova 1960)

- di_{EX} is also used in causal clauses when accompanied by the preceding *dondjāt* ‘for that reason’ or other causal expressions:

(10) *zamin xist sud dondjāt di boron sod*
 earth wet go.PST.M for.that LNK rain hit.PST
 ‘The earth got wet because it had been raining.’

- Cf. Jaroslava’s talk earlier today: the causal meaning is due to *dondjāt*, not *di* as such.

Mirative function

- *di_{EX}* is often used in narratives to indicate some kind of unusual or unexpected event:

- (11) *daδ az jīngāl tūy̥j xu yoδ-d yi jōy idi wi-ri paryend*
then ABL forest go_away.PRF.M and come.PRS-3SG one place LNK D3.M.OBL-DAT ovring
dučor saw-d
encountered go.PRS-3SG
- ‘He moved away from the forest, comes to a place, and he encounters an ovring (narrow mountain path).’ (Sokolova 1960, 59)
- (12) *yā yač idi wi šögbuc nist*
D3.SG.NOM come.M.PRF LNK D3.M.OBL lamb NEG.EXST
- ‘He came, and his lamb is not there.’ {brt_txt_tribrata}

- Wakhi has very similar uses of clause-initial *ki*, which Obrtlová (2019) describes as post-nuclear temporal clauses.
- In such constructions, the subordinate clause is “highlighted (foregrounded) while the main clause is backgrounded” (Obrtlová 2019, 265).
- This also applies to Bartangi from a pragmatic point of view. However, it is unclear to me that such examples can be treated as temporal clauses, as there is no evidence of syntactic embedding, and functionally, they form part of a consecutive narrative.
- Furthermore, some examples are hardly conceivable in the temporal sense (??“He came, when his lamb is not there”).
- Obrtlová (2025, Uppsala conference): *ki* as an interpretive use marker.

Consecutives in spoken texts

- It is not even clear to what extent *di* can be assigned any particular interpretation.
Consider examples like the following

- (13) a. *δaw kud yi jondor injuvd di...* (500ms)
 two dog one animal catch.PST LNK
 'Two dogs caught one animal (and)...'
- b. *wi-tör=af vo wi nusk-tör=af wilčak injuvd*
 D3.M.OBL-SUPER=3PL.TR again D3.M.OBL muzzle-SUPER=3PL.TR measure put.PST
 '...they put a measure on its muzzle.' {jonal1_200623}
- (14) a. *sarpiro=an di tar yiw rawon ca sad di...* (1 s 130ms)
 before=3PL SUBD LOC.EQ hunt going SUBD go.PST.PL LNK
 b. *e... yi daxo vud*
 HES one prayer be.PST
 'When in the old times we went hunting...there was one prayer [before the hunt].'

- Especially in the latter example, the first clause already has the subordinator *ca*; therefore, *di_{EX}* cannot be a clause-initial complementizer here, because technically it introduces the MAIN clause.

- Quite often di_{EX} seems to behave merely as a hesitation marker, or perhaps a discourse deictic particle, without any obvious clause linkage functions:

(15) *a yim idi... tupxona*
and D1.SG.NOM LNK fortress
'And this is... a fortress.' {fortress_180623}

- Cf. the Ossetic hesitation marker *jed* | *idi*, from the same demonstrative pronoun (Abaev 1958).

- Also an exclamative:

(16) *yi lap naxčir umder di(di)!*
one many goat D3.LOC:IN LNK
'There are so many mountain goats there!' (Karamxudoev 1973, 277)

Corpus statistics

- I have annotated 178 examples of *di_{EX}* (and other clause linkage markers) in natural texts collected in 2023–2024 and published in Sokolova (1960). If quotative examples are excluded, consecutive and hesitation examples make up 38% of all observations.

| Function | # |
|---|----|
| Quotative | 88 |
| Other complement | 21 |
| “Consecutive” | 21 |
| “Hesitation” | 13 |
| Result | 5 |
| Purpose | 3 |
| Relative ('such'), manner / degree ('so... that') | 17 |
| Temporal (<i>waxto di</i> ... etc.) | 8 |
| Unclear interpretation | 2 |

- If only modern spoken texts are considered, of the total 77 examples, 37 are quotative (mostly in fossilized form with the verb: *luvd-i* ‘s/he said’), 11 are consecutive and 13 are hesitation-like.
- This means that such “discourse-structuring” uses make up 60% of all uses of *di_{EX}* outside of direct speech marking.
- It is possible that many unclear uses of *di_{EX}* were omitted from Sokolova (1960) during editing; otherwise, the difference in relative frequency is too striking.

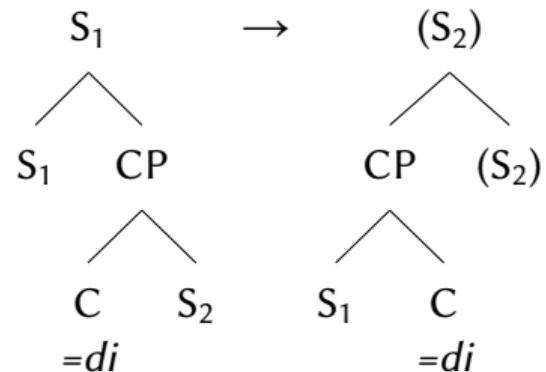
Preliminary generalization

Meaning of *di_{EX}*

di is a clause-final particle that signals to the hearer that the clause it marks is followed by another clausal constituent or utterance.

- Cf. the analysis of *ke* in Ghomeshi (2001, 37):
 - ▶ “I propose that, as a marker of subordination, *ke* can be cliticized onto any lexical item that is followed by a propositional constituent (vP, CP), but that it does not itself head a functional projection.”
- The difference between *di_{EX}* and *ke* is that, while *ke* also serves as a genuine complementizer (e.g. in relative clauses), *di_{EX}* is limited to this “continuation marker” role (and does not seem to be even necessarily a marker of subordination).
- See more discussion in Belyaev (2025). Also see talk by Elena Bashir, Clause Linkage 2025: left-branching use of *ki* in various Iranian languages.

- Or, perhaps, a milder statement: *di_{EX}* as a final particle alternates with the clause combining function pattern copied from Tajik *ki*.
- Cf. the use of borrowed *ki* in the same functions in Wakhi (Obrtelová 2019).
- How did it develop diachronically? We seem to have three options:
 1. clause-initial conjunction into clause-final particle (due to enclitic status)
 2. clause-final particle acquiring conjunction properties (due to Tajik influence?)
 3. merger of two distinct items: conjunction from demonstrative (Rastorgueva and Edelman 2000, 132), particle from enclitic 2sg. pronoun **tai* (Morgenstierne 1974, 29)
- Right now this is an open question. The first scenario is typologically interesting, because it represents a kind of “inverse insubordination”, with the main clause + subordinator acquiring main clause status.



The status of *xu*

- The marker *xu* in Bartangi normally conjoins clauses expressing two consecutive events, as an enclitic to the first clause:

| | | | |
|------|---|---------|-----------------------------|
| (17) | <i>bād yač pa xu mallā =xu...</i> | (440ms) | <i>aynan k-az-um xu</i> |
| | then come.PRF.M LOC.UP REFL house =SEQ | | same EMPH-OBJ-D3.F.OBL REFL |
| | <i>bobokalon-ā k-az wī pilta-yī can qadimā zoz-d =xu</i> | | |
| | grandfather-POSS EMPH-OBJ D3.M.OBL fuse-ADJ gun old take.PRS-3SG =SEQ | | |
| | <i>sawd</i> | | |
| | go.PRS:3SG | | |

'Then he came to his house and... nevertheless he takes his grandfather's old matchlock rifle and goes.' {moustache_man_260624}

- But it can also stand sentence-finally, with seemingly reverse order of clauses:

| | | |
|------|--|--|
| (18) | <i>zaxmī sad yā čabūd, žer-ac =um az um δod =xu</i> | |
| | wounded go.PST.M D3.SG.NOM pigeon stone-TERM=1SG OBJ D3.F.OBL hit.PST =SEQ | |
| | 'I hit the pigeon with a stone, and it became wounded.' | |
| | {Karamxudoev 1973, 258} | |

- Note that such sentences have falling intonation at the end (unlike *=di* clauses, which imply incompleteness).

- But the event order may not be so clear:

(19) *wazīr-puc sud az um daraxt sont =at, yā yurx zibud,*
 vizier-son go.PST.M OBJ D3.F.OBL tree raise.PST =CONJ D3.SG.NOM bear run_away.PST.M
quloy mis wī-r na luvd xu
 thanks ADD D3.M.OBL-DAT NEG say.PST =SEQ
 ‘The vizier’s son lifted the tree and the bear ran away, and he didn’t even say thank you.’
 (spoken text)

- Such constructions are rare in texts, but very frequent in dialogues, cf.:

(20) *mun puc yoðd =xu*
 I.OBL son come.PRS:3SG =SEQ
 (‘Let’s go.’ –)‘My son comes and’

- Also in question-answer pairs:

(21) *tū =t sarpiro cawaxt xurvo xūg? — pa basid=um yat =xu*
 thou.NOM=2SG first when shorba eat.PST LOC.UP B. =1SG come.PST =SEQ
 ‘When did you first eat shorba? — When I came to Basid.’

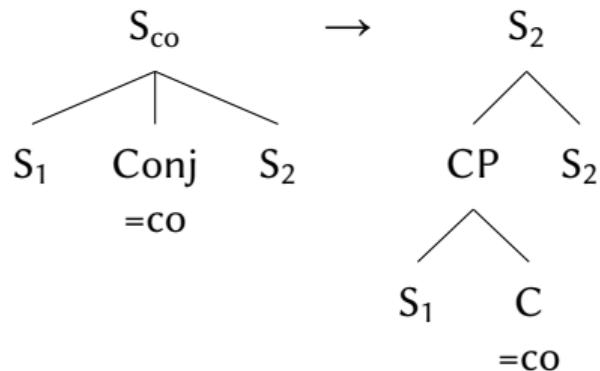
- Normally this would be a diagnostic in favour of subordination, but for *xu*, a final particle status is also possible. See Belyaev (submitted).

- Note that Bartangi has one undisputed final particle: the interrogative *=o*, which goes back to the conjunction ‘or’:

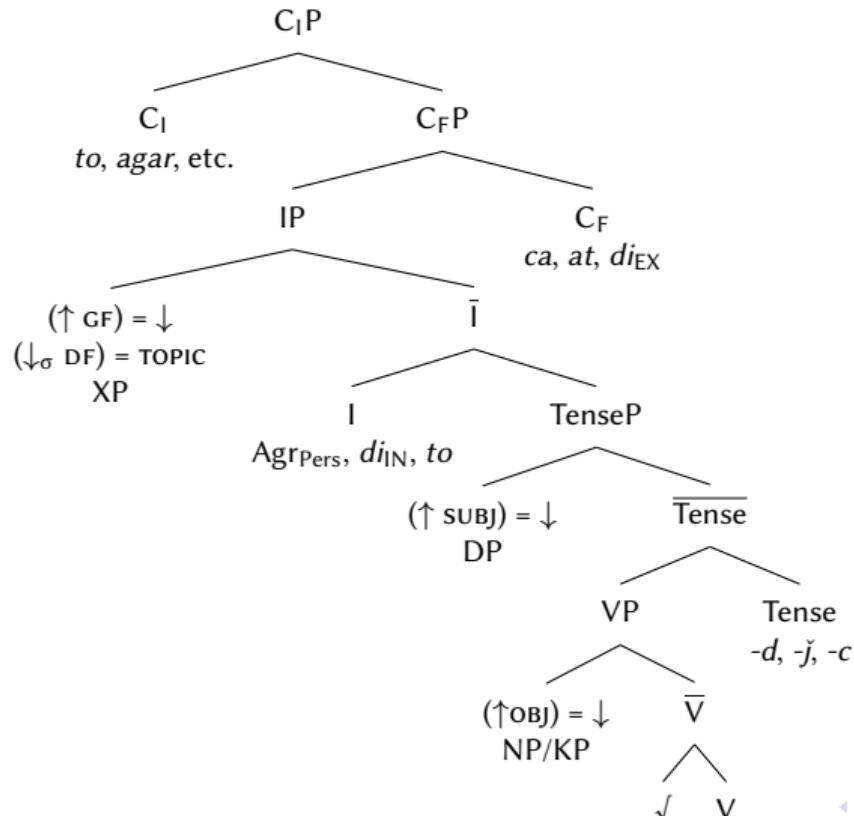
(22) *tū =at tar čöd vud=o?*
thou.NOM=2SG LOC.EQ house be.PST.M=Q
‘Were you at home?’

(Karamxudoev 1973, 230)

- So the idea that Bartangi has developed a system of sentence-final particles akin to those in (South-)East Asian languages is not that outlandish.
- The *xu* has an unusual etymology: it seems to go back to a reflexive, possibly contaminated with a demonstrative (Rastorgueva and Edelman 2007, 430).
- Thus there are, again, three possible diachronic scenarios:
 1. Independent grammaticalization of particle and coordinator.
 2. Particle → Coordinating conjunction → Clause-final conjunction / sentence-final particle
 3. Conjunction → Particle → Subordinator
- Comparative evidence suggests that the coordinating function for *xu* is the original.



Two C positions?



Conjunctions in Ossetic

Inventory

- Subordinators: a large inventory. Mostly preverbal, but a few “floating” subordinators (1P – 2P – PV, see Belyaev 2014).
- Subordination mostly via correlatives, but in complement and purpose clauses the correlate may be omitted in certain circumstances.
- Coordinating conjunctions:

æmæ ‘and’ (sequence, result, etc.)

fælæ ‘but’

kænæ ‘or’ (in declaratives)

ævi ‘or’ (in questions)

The coordinating *æmæ*

- The Ossetic *æmæ* seems to combine features of Bartangi *di_{EX}* and *xu* discussed above.
- First, it looks like a normal coordinator that encliticizes to the preceding clause:

(23) žawər ſa=xi-mæ ba-səd-i =æmæ ſ-xʷəššəd
 Z. his self-ALL PV-go-PST.3SG and PV-sleep[PST.3SG]
 ‘Zaur came home and went to sleep.’

- But it can also introduce a number of subordinate (pseudocoordinate) clauses, see Belyaev (2015). This is similar to *di_{EX}*:

(24) žawər-ə fænd-ə =æmæ alan ærba-sæw-a
 Z.-GEN want-PRS.3SG =and A. PV-go-PST.3SG
 ‘Zaur wants Alan to come.’

(25) žæxx xʷələz u, wəm-æn =æmæ k'ævda warəd
 ground wet be.PRS.3SG that-DAT =and rain rain[PST.3SG]
 ‘The ground is wet because it has been raining.’

- But it can also appear clause-finally, with a causal meaning:

(26) *jej, dənjar læg, nart =mæ ra-rvəst-oj a-rdæm, næ= fos syd-æj mard-əstə æmæ die-PST.3PL and*

‘O great man, the Narts sent me here, for our cattle were dying of famine.’

(Ossetic National Corpus = ONC)

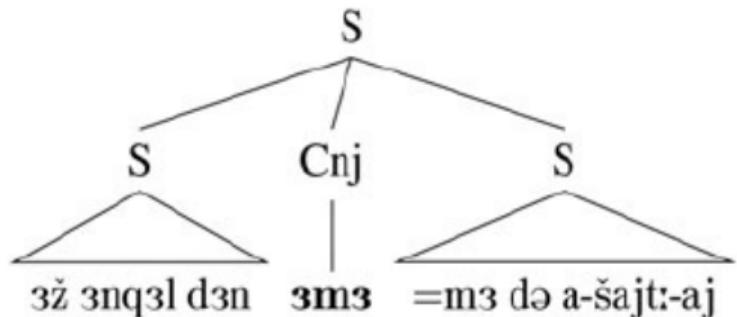
- Or as a particle:

(27) Ossetic: *æmæ* (particle)
axæm tarst =dən kod-ton æmæ!
such fear thee.DAT do-PST.1SG and
‘I scared you so much!’

(ONC)

- There is good evidence in favour of a subordination analysis of (26), see Belyaev (submitted).

- I believe that we are dealing with two independent diachronic developments:
pseudocoordination c-structure remains unchanged, f-structure switches to subordination
(Belyaev 2015)
clause-final reanalysis of [X =Conj Y] as [X =Ptcl/Sub] (Y), as in Bartangi
- The same descriptive problem: multiple C positions (initial, preverbal, final). Unlike Bartangi, less evidence for other sentence-final particles (which are not very widespread in adjacent languages either).



| | | | | | | | | | |
|----------|--|------|--------------------|----------|-------------------|------|------------------|-----|-------------------|
| $f:$ | <table border="0"> <tr> <td>PRED</td><td>'think(SUBJ COMP)'</td></tr> <tr> <td>SUBJ</td><td>$i1:[PRED 'PRO']$</td></tr> </table> | PRED | 'think(SUBJ COMP)' | SUBJ | $i1:[PRED 'PRO']$ | | | | |
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| COMPTYPE | PC | | | | | | | | |
| SUBJ | $j:[PRED 'PRO']$ | | | | | | | | |
| OBJ | $i2:[PRED 'PRO']$ | | | | | | | | |

'I think that you cheated me.'

Conclusions

- Two Iranian languages, Bartangi and Ossetic, have remarkably similar clause- or sentence-final uses of subordinating and coordinating conjunctions.
- This result is probably due to the reanalysis of enclitic coordinating conjunctions as clause-final conjunctions and / or sentence-final particles.
- In LFG, this can modeled as reanalysis at the level of c-structure, triggered by enclitic status of the conjunctions.
- However, this has a few interesting implications:
 - ▶ A process like insubordination, but one that leads to *main* clauses used independently.
 - ▶ Coordination to subordination, but left-branching rather than right-branching ($X \text{ Conj } Y \rightarrow [X \text{ Sub}] Y$).
 - ▶ The need for multiple C projections in LFG, at least until additional mechanisms are invented that could lexically condition branching direction.

Қулоғи бисёр! quloy-i bisyor!



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