

The clause internal left edge: Exploring the preverbal position in Ossetian

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The goal

Provide explanation for the peculiar clause structure in Ossetian, where functional projections normally conceived of as the left edge of the clause are located in the preverbal position, clause internally.

The problem

(1) æž žon-in madinæ jæ firt-i
 I know-PRS.1SG M. 3SG.GEN son-ACC
 kæj arvišt-a goræt-mæ.
 that send.PST-TR.3SG city-LAT
 'I know that Madina sent her son to the city.'
 ...madinæ jæ firt-i **kæj arvišta** goræt-mæ.
 ...madinæ jæ firt-i goræt-mæ **kæj arvišta**.
 ...madinæ **kæj arvišta** jæ firt-i goræt-mæ.
 ...**kæj arvišta** madinæ jæ firt-i goræt-mæ.

The problem

(1) æž žon-in madinæ jæ firt-i
 I know-PRS.1SG M. 3SG.GEN son-ACC
 kæj arvišt-a goræt-mæ.
 that send.PST-TR.3SG city-LAT
 'I know that Madina sent her son to the city.'
 *... **kæj** madinæ jæ firt-i goræt-mæ **arvišta**.
 *...madinæ jæ firt-i **kæj** goræt-mæ **arvišta**.
 *... **kæj** madinæ **arvišta** jæ firt-i goræt-mæ.
 *... **arvišta** madinæ **kæj** jæ firt-i goræt-mæ.

The problem

Preverbal complex:

- Negation
 - Complementizers
 - Wh-movement
- Left edge phenomena

The problem

- PC + verb: rigid
- Order of other constituents: (superficially) free

XP YP ZP V	XP YP ZP PC V
XP YP V ZP	XP YP PC V ZP
XP V YP ZP	XP PC V YP ZP
V XP YP ZP	PC V XP YP ZP

Exploring preverbal position: Negation

- (2) alan zalinæj-mæ næ azird-ta.
A. Z.-COM NEG speak-PST.3SG
'Alan didn't speak to Zalina.'
- (3) *alan næ zalinæj-mæ azird-ta.
A. NEG Z.-COM speak-PST.3SG
- (4) alan aræx næ ærbasæu-i.
A. often NEG come-PRS.3SG
'Alan doesn't come often.' / 'Often, Alan doesn't come.'
- (5) *alan næ aræx ærbasæu-i.
A. NEG often come-PRS.3SG

Exploring preverbal position: Negation

- (6) alan nikæj-mæ azird-ta.
A. nobody-COM speak-PST.3SG
'Alan didn't speak to anybody (lit. spoke to nobody).'
- (7) *nikæj-mæ alan azird-ta.
nobody-COM A. speak-PST.3SG
- (8) zalinæj-mæ niçi azird-ta.
Z.-COM nobody speak-PST.3SG
'Nobody spoke to Zalina.'
- (9) *niçi zalinæj-mæ azird-ta.
nobody Z.-COM speak-PST.3SG

Exploring preverbal position: Negation

- (10) ası zadaçæ [nisavær čižg] škodt-a.
this problem noone girl do-PST.3SG
'No girl solved this problem.'
- (11)* [nisavær čižg] ası zadaçæ škodt-a.
noone girl this problem do-PST.3SG

Exploring preverbal position: Negation

- (12) *alan nikæj-mæ næ azird-ta.
A. nobody-COM NEG speak-PST.3SG
- (13) niçi nikæj-mæ azird-ta.
nobody nobody-COM speak-PST.3SG
'Nobody spoke to anybody (lit. nobody spoke to nobody).'
- (14) ???nikæj-mæ niçi azird-ta.
nobody-COM nobody speak-PST.3SG
- (15) nikæj-mæ æmæ niçi azird-ta.
nobody-COM and nobody speak-PST.3SG
'Nobody spoke to anybody.'

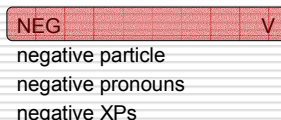
Exploring preverbal position: Negation

Summary:

- The negative particle strictly in preverbal position
- Negative pronouns strictly in preverbal position
- Negative XPs (complex phrases containing negative pronouns) strictly in preverbal position
- No negative concord (the negative particle and negative XPs complementarily distributed)
- Superiority effects

Exploring preverbal position: Negation

Summary:



Exploring preverbal position: Complementizers

- (16) æž žon-in
I know-PRS.1SG
alan dzaudžiqau-i kəj sər-i.
A. Vladikavkaz-LOC that live-PRS.3SG
'I know that Alan lives in Vladikavkaz.'
- (17)...alan dzaudžiqau-i kəj nə sər-i.
A. Vladikavkaz-LOC that NEG live-PRS.3SG
'... that Alan doesn't live in Vladikavkaz.'
- (18)*...alan dzaudžiqau-i nə kəj sər-i.
A. Vladikavkaz-LOC NEG that live-PRS.3SG

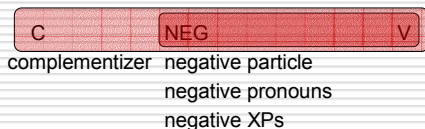
Exploring preverbal position: Complementizers

- (19) æž žon-in
I know-PRS.1SG
alan kəj nikəj-mə azird-ta.
A. that nobody-COM speak-PST.3SG
'I know that Alan didn't speak to anybody.'
- (20)*...alan nikəj-mə kəj azird-ta.
A. nobody-COM that speak-PST.3SG

Exploring preverbal position: Complementizers

Summary:

- Complementizers in the preverbal position
- The negative particle and negative XPs (if any) between the verb and complementizer



Exploring preverbal position: wh- movement

Clause types:

- Questions
 - Indirect questions
 - Relative clauses
 - Adverbial clauses
- in this talk

Exploring preverbal position: wh- movement

- (21) zalinəj-mə čī azird-ta?
Z.-COM who speak-PST.3SG
'Who spoke to Zalina?'
- (22) čī azird-ta zalinəj-mə?
who speak-PST.3SG Z.-COM
'Who spoke to Zalina?'
- (23)*čī zalinəj-mə azird-ta?
who Z.-COM speak-PST.3SG

Exploring preverbal position: wh- movement

- (24) æž žon-in
I know-PRS.1SG
dzaudžiqau-i čī (*kəj) sər-i.
Vladikavkaz-LOC who that live-PRS.3SG
'I know who lives in Vladikavkaz.'
- (25)... čī kəmə sər-i.
who where live-PRS.3SG
'...who lives where.'
- (26)...kəmə čī sər-i.
where who live-PRS.3SG
- (27)...kəmə əmə čī sər-i.
where and who live-PRS.3SG

Exploring preverbal position: wh-movement

- (28) zalinæj-mæ čī næ azird-ta?
Z.-COM who NEG speak-PST.3SG
'Who didn't speak to Zalina?'
- (29) *zalinæj-mæ næ čī azird-ta?
Z.-COM NEG who speak-PST.3SG
- (30) čī nikæj-mæ azird-ta?
who nobody-COM speak-PST.3SG
'Who didn't speak to anybody?'
- (31) *nikæj-mæ čī azird-ta?
nobody-COM who speak-PST.3SG

Exploring preverbal position: wh-movement

Summary:

- wh-pronouns and wh-XPs (complex phrases containing wh-pronouns) in the preverbal position
- The negative particle and negative XPs (if any) between the verb and wh
- Preverbal complementizers and wh-pronouns/XPs complementarily distributed
- Superiority effects

Exploring preverbal position: wh-movement

Summary:



complementizer	negative particle
wh-pronouns	negative pronouns
wh-XPs	negative XPs

Around the preverbal position: word order variation

- Ossetian is an SOV language (e.g., Gagkaev 1956, Abaev 1959)

SOV:

- (32) næ sportmentæ diššadži uæłaxiztæ ævdišins.
our sportsmen wonderful victories show
'Our sportsmen achieve wonderful victories.'

- (33) xalon cixti k'ærtt ššardta.
crow of cheese piece found
'The crow found a piece of cheese.'

Around the preverbal position: word order variation

- Ossetian is an SOV language?

SVO:

- (34) šivællættæ šk'olajı arvitins bonı fildær xaj.
children at_school spend of_day bigger part
'The children spend most of the day at school.'

VSO:

- (35) bazıdta soslan, kæj fæsjadta čelæxsærtæg jæ zırd.
understood S. that broke Ch. his word
'Soslan understood that Chelaxshartag had broken his promise.'

Around the preverbal position: word order variation

- Ossetian is an SOV language?

OVS:

- (36) de'fšurGil dın idon aftauzæn mæji fırt...
on_your_horse to_you bridle will_put of_moon son
'The son of the moon will bridle your horse, (and then the son of the sun will saddle it).'

OSV:

- (37) ... æmæ piti jæ amerikag læpputæ fervæžın kodtoj.
and Pete his American guys rescued
'(Pete's plane fell into the sea) but Pete was rescued by his American friends.'

Around the preverbal position: word order variation

Lambrecht 1994:

sentence focus (thetic)

Q: What happened?

A: My car broke down.

predicate focus (categorical)

Q: What happened to your car?

A: My car/It broke down.

argument focus (categorical)

Q: I heard your motorcycle broke down?

A: My car broke down.

Around the preverbal position: word order variation

(38) alan **nog** **xæzar** **araži.** predicate focus

A. new house build.PRS.3SG

'Alan is building a new house.'

(38)' alan **NOG XÆZAR** **araži.** contrastive focus

(39) alan **araži** **nog** **xæzar.** narrow focus: O

(40) **nog** **xæzar** **araži** **alan.** narrow focus: S

(41) **araži** **alan** **nog** **xæzar.** thetic

(42) **nog** **xæzar** **ALAN** **araži.** contrastive focus

(43) ??? **araži** **nog** **xæzar** **alan.**

Around the preverbal position: word order variation

Word order variation reflects various types of information structure of the sentence

The verbal complex, whose internal structure is rigidly fixed, and the Top/Foc movement interact producing the effect of "floating" of the verbal complex within the clause

Around the preverbal position: two types of complementizers

preverbal complementizers:

kæj 'that', kuid 'so that', kæd 'when'...

clause-initial complementizers:

sæmæj 'so that', kæd 'if', sîma 'as if'...

Around the preverbal position: two types of complementizers

(44) alan-i fænd-i

A.-GEN want-PRS.3SG

sæmæj zalinæ makæj-mæ zur-a.

so_that Z. nobody-COM speak-COND.3SG

'Alan wants Zalina not to speak to anybody.'

(45) *...**kuid** zalinæ makæj-mæ zur-a.

so_that Z. nobody-COM speak-COND.3SG

(46) ...zalinæ **kuid** makæj-mæ zur-a.

Z. **so_that** nobody-COM speak-COND.3SG

'Alan wants Zalina not to speak to anybody.'

Around the preverbal position: two types of complementizers

(47) d-i **kæj-mæ** fænd-i

you-GEN **who-COM** want-PRS.3SG

zalinæ **kuid** zur-a?

Z. **that** speak-COND.3SG

'Who do you want Zalina to speak to?'

(48) *d-i fænd-i

you-GEN want-PRS.3SG

zalinæ **kæj-mæ** **kuid** zur-a?

Z. **who-COM** **that** speak-COND.3SG

Around the preverbal position: two types of complementizers

(49) d-_i kǽj-mǽ fǽnd-_i
 you-GEN who-COM want-PRS.3SG
 sǽmǽj zalinǽ zur-a?
 that Z. speak-COND.3SG
 'Who do you want Zalina to speak to?'

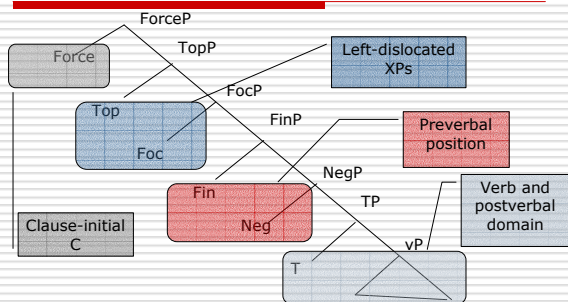
(50) d-_i fǽnd-_i
 you-GEN want-PRS.3SG
 sǽmǽj zalinǽ kǽj-mǽ zur-a?
 that Z. who-COM speak-COND.3SG
 'Who do you want Zalina to speak to?'

Interim summary

Phenomena we have to account for:

- preverbal position of Neg, *wh* and a number of C's
- complementary distribution of the negative particle and negative XPs, as well as of preverbal C's and *wh*-XPs
- impenetrability of the complex "preverbal position + verb"
- two positions for C
- floating of the complex "preverbal position + verb" with respect to argument XPs

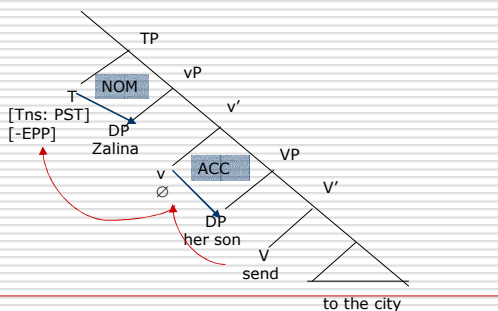
Proposal: An overview



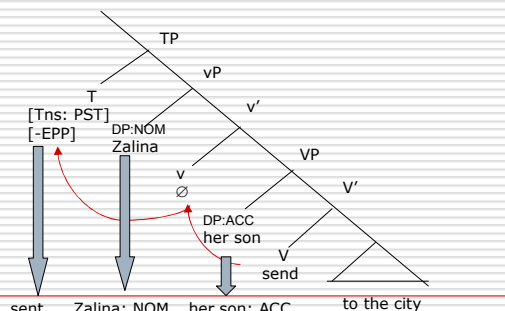
Proposal: Verbal domain

- Case assignment *in situ* under argeement between probe and goal (Chomsky 1998, 1999, 2001)
 - $V \bar{b} v \bar{b}$ Tmovement
 - T { $\bar{E}P$ }; subject DP does not move to Spec, TP
- (51) ... (kǽj) arvišta zalinǽ jǽ firt-_i gorǽt-mǽ.
 that sent Z.NOM her son-ACC city-LAT
 '...(that) Zalina sent her son to the city.'

Proposal: Verbal domain



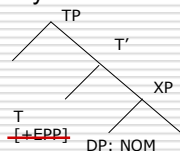
Proposal: Verbal domain



Proposal: Verbal domain

Crucial assumption: T { EPP}

T [+EPP]: DP that receives nominative (null, ...) case from agreeing T moves to its Spec to satisfy EPP.



Proposal: Verbal domain

T [+EPP]: English

- ❑ In the declarative clauses, the subject DP precedes T
 - ❑ In the unaccusative and passive clauses, the subject DP precedes T
- (52) John was arrested. / *Was arrested John.
- ❑ Raising structures
- (53) John seems to sleep. / *Seems (to) John (to) sleep.

Proposal: Verbal domain

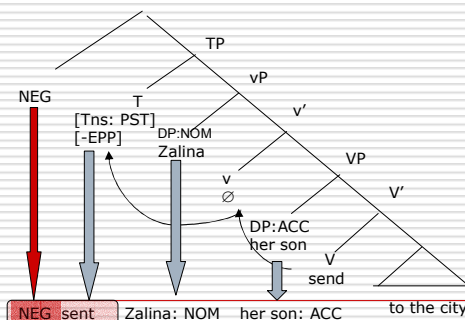
T [-EPP]: Ossetian

- ❑ In declarative clauses, the subject DP can follow (V+v+)T
- ❑ Inthetic unaccusative clauses, the subject DP normally follows (V+v+)T

(54) ærsid-i ualzæg.
come-PST.3SG spring
'The spring came.'

- ❑ No passive (contra Abaev 1959)
- ❑ No raising structures (Belyaev 2009)

Proposal: Verbal domain



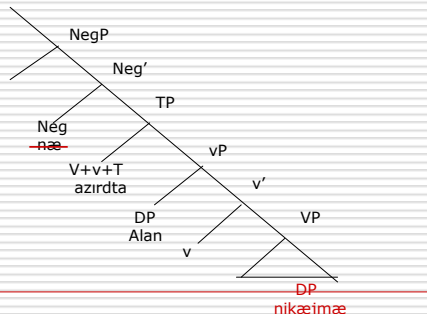
Proposal: Negation

- ❑ the negative particle is a Neg head
- ❑ negative pronouns/XPs move to Spec, NegP
- ❑ preverbal placement of negative pronouns/XPs is an instance of A'-movement (superiority effects, conjunction, island restrictions, pied-piping, crossover)
- ❑ "multiply filled Neg filter" (cf. Multiply Filled COMP Filter, Chomsky&Lasnik 1977), thus no Negative Concord

Proposal: Negation

(55) nikæj-mæ azird-ta alan.
nobody-COM speak-PST.3SG A.
'Alan didn't speak to anybody (lit. spoke to nobody).'

Proposal: Negation



Proposal: Preverbal complementizers

Preverbal complementizers merge as a Fin head
Rizzi 1997:

(56) Gianni pensa, il tuo libro, di PRO conoserlo bene.
G. thinks the your book Fin PRO know.it well
'Gianni thinks that your book, he knows well.'

Roehrs&Labelle 2001:

(57) Il s'est aperçu __ la porte QUE elle était ouverte.
he noticed the door THAT it was open
'He noticed that the door was open.'

= (expected): Il s'est aperçu que la porte elle était ouverte.

Proposal: Preverbal complementizers

Roehrs&Labelle 2001

(57) Il s'est aperçu __ la porte QUE elle était ouverte.
he noticed the door THAT it was open
'He noticed that the door was open.'

(58) Misplaced QUE: [_{ForceP} que_i [_{FinP} DP que_i ...]]
- improper Chain Reduction
- covert movement of the complementizer to Force

Proposal: Preverbal complementizers

Ossetian preverbal complementizers:

□ merge as Fin

□ no overt movement to Force

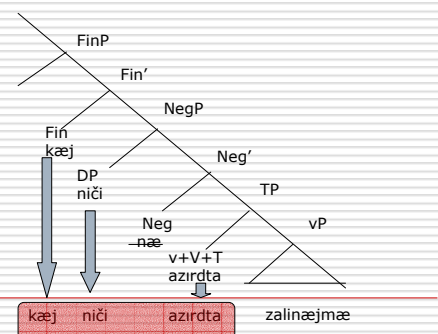
Evidence for the covert movement: complementary distribution of preverbal and clause initial complementizers:

(59) *alan-i fænd-i
A.-GEN want-PRS.3SG
sæmæj zalinæ kuid zur-a madinæj-mæ.
so_that Z. so_that speak-COND.3SG M.-COM

Proposal: Preverbal complementizers

(60) æž žon-in
I know-PRS.1SG
kæj niči azird-ta zalinæj-mæ.
that nobody speak-PST.3SG Z.-COM
'I know that nobody spoke to Zalina.'

Proposal: Preverbal complementizers



Proposal: *wh*-pronouns and XPs

Typological observations

Greenberg 1963, Universal 12:

If a language has dominated order VSO in declarative sentences, it always puts interrogative words or phrases first in interrogative word questions; if it has dominant order SOV in declarative sentences, there is never such an invariant rule.

Primus 2001: V-final languages have either sentence-initial *wh*-words or *wh*-words are placed in immediately preverbal position.

Proposal: *wh*-pronouns and XPs

Kim 1988: SOV languages with preverbal *wh*-words:

Turkish, some Dravidian languages (Telugu, Tamil), some Indo-Aryan languages (Gudjarati, Hindi-Urdu, Kashmiri), Korean, Japanese, Basque. Hungarian and Georgian: preverbal *wh*, SOV/SVO.

Why preverbal position?

Horvath 1986, Kiss 1988, Hungarian: *wh*-words move to the focus position

Shadi & Megerdooimian 2009, Persian: *wh*-words are left-adjoined to vP

Proposal: *wh*-pronouns and XPs

Ossetian *wh*:

□ Adjunction to vP is not an option because of intervening negative XPs

□ Movement to Spec, FocP is not an option because of complementary distribution with preverbal complementizers

(61) d-ı fænd-ı...
you-GEN want-PRS.3SG

a. *...zalinæ kæj-mæ kuid zur-a?
Z. who-COM that speak-COND.3SG

b. ...sæmæj zalinæ kæj-mæ zur-a?
that Z. who-COM speak-COND.3SG

'Who do you want Zalina to speak to?'

Proposal: *wh*-pronouns and XPs

□ *wh*-pronouns/XPs move to Spec, FinP

□ *wh*-movement is an instance of A'-movement (superiority effects, conjunction, island restrictions, pied-piping, crossover)

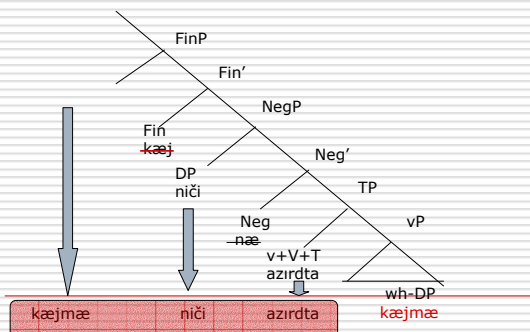
□ Multiply Filled COMP Filter; thus no overt complementizer in Fin if *wh* is in Spec, FinP

(62) æž žon-ın
I know-PRS.1SG

kæjmæ niči azird-ta.
who-COM nobody speak-PST.3SG

'I know whom nobody spoke to.'

Proposal: *wh*-pronouns and XPs



Proposal: Clause initial complementizers

Clause-initial C's end up as a Force head

2 options

□ merge as Force head

□ merge as Fin and then move overtly to Force

Literary Ossetian: only clause initial position

Colloquial Ossetian: also possible in any position between Force and Fin

Proposal: Clause initial complementizers

(63) alan fændi...

A. wants

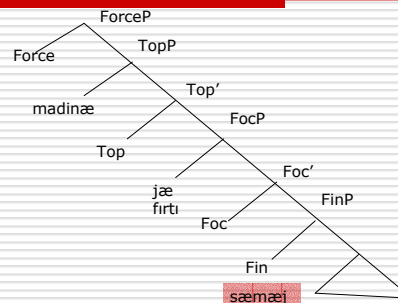
a. sæmæj madinæ jæ firti arvita gorætmæ.
that M. her son sends to_city

b. madinæ sæmæj jæ firti arvita gorætmæ.
M. that her son sends to_city

c. madinæ jæ firti sæmæj arvita gorætmæ.
M. her son that sends to_city

'Alan wants Madina to send her son to the city.'

Proposal: Clause initial complementizers



Proposal: Evidence from non-finite clauses

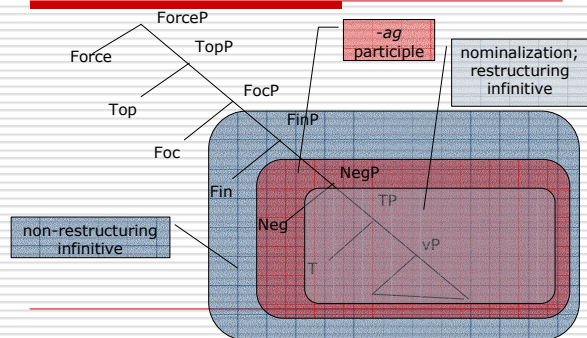
- Additional evidence supporting our analysis comes from different types of non-finite clauses
- Non-finite clauses differ as to the amount of functional structure they can project
- The amount of functional projections increases monotonically
- Hence the implicational chain
Force \Rightarrow ... \Rightarrow T \Rightarrow v, where " $F_i \Rightarrow F_{i-1}$ " reads as "If a (non-finite) clause contains the projection of F_i , it also contains the projection of F_{i-1} "

Proposal: Evidence from non-finite clauses

Availability of functional projections forms an implicational chain:

- bare vP/TP: no negative particle/negative XPs, no *wh*, no complementizers: nominalization (-d/-t), restructuring infinitive
- NegP: negative particle/negative XPs, but no *wh* / complementizers: active participles (-ag)
- FinP: negative particle/negative XPs, but no clause-initial complementizers: non-restructuring infinitive

Proposal: Evidence from non-finite clauses



Proposal: Evidence from non-finite clauses

Thus the complexity of the structure increases monotonically

If a less-than-fully-projected clause contains NegP, it also contains TP

If a less-than-fully-projected clause contains NegP, it also contains both NegP and TP

A fully projected clause contains ForceP as well as the material all the way down the tree, including FinP, NegP, and TP

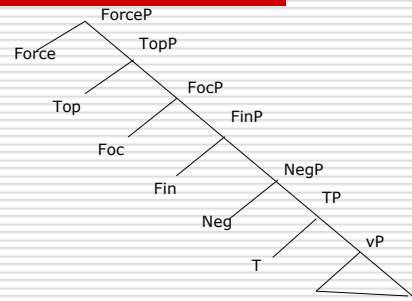
The hierarchy of functional heads "ForceP, ..., FinP, NegP, TP" accounts for this pattern in a principled way

Interim summary

Phenomena we had to account for:

- preverbal position of Neg, *wh* and several C
- complementary distribution of negative particle and negative XPs, as well as preverbal C and *wh*-XPs
- impenetrability of the complex “preverbal position + verb”
- two positions for C
- floating of the complex “preverbal position + verb” with respect to argument XPs

Deriving clause internal effect



C2 wh/C1 Neg V XP YP ZP

Deriving clause internal effect

Thetic sentences: involve no movement to Top/Foc

(64) *araži alan nog xæzar.* VSO
builds Alan new house

‘Alan is building a new house.’

C2	Top	Foc	wh/C1	NEG	V+v+T	XP	YP	ZP
						<i>araži alan xæzar</i>		
			<i>niči</i>			<i>araži niči xæzar</i>		
<i>kæj</i>		<i>kæj</i>				<i>araži alan xæzar</i>		
<i>sæmæj</i>		<i>sæmæj</i>				<i>araža alan xæzar</i>		

Deriving clause internal effect

Categorical sentences: involve movement to Top/Foc

(65) *alan araži nog xæzar.* SVO
Alan builds new house

‘Alan is building a new house.’

C2	Top	Foc	wh/C1	NEG	V+v+T	XP	YP	ZP
						<i>alan araži alan xæzar</i>		
						<i>alan nisi araži alan nisi</i>		
<i>kæj</i>		<i>alan</i>		<i>kæj</i>		<i>araži alan xæzar</i>		
<i>sæmæj</i>		<i>alan</i>		<i>sæmæj</i>		<i>araža alan xæzar</i>		

Deriving clause internal effect

Categorical sentences: involve movement to Top/Foc

(66) *nog xæzar araži alan.* OVS
new house builds Alan

‘Alan is building a new house.’

C2	Top	Foc	wh/C1	NEG	V+v+T	XP	YP	ZP
						<i>xæzar araži alan xæzar</i>		
			<i>niči</i>			<i>xæzar araži niči xæzar</i>		
<i>kæj</i>		<i>xæzar</i>		<i>kæj</i>		<i>araži alan xæzar</i>		
<i>sæmæj</i>		<i>xæzar</i>		<i>sæmæj</i>		<i>araža alan xæzar</i>		

Deriving clause internal effect

Categorical sentences: involve movement to Top/Foc

(67) *nog xæzar ALAN araži.* OSV
new house Alan builds

‘Alan is building a new house.’

C2	Top	Foc	wh/C1	NEG	V+v+T	XP	YP	ZP
						<i>xæzar alan araži alan xæzar</i>		
<i>kæj</i>		<i>xæzar alan</i>		<i>kæj</i>		<i>araži alan xæzar</i>		
<i>sæmæj</i>		<i>xæzar alan</i>		<i>sæmæj</i>		<i>araža alan xæzar</i>		

Deriving clause internal effect

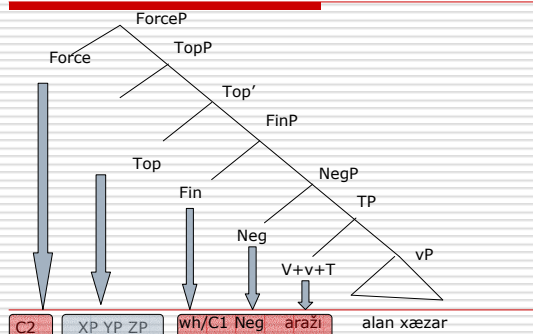
Categorical sentences: involve movement to Top/Foc

- (68) a. alan nog xæzar araži. SOV
 b. alan NOG XÆZAR araži. SOV
 new house Alan builds

'Alan is building a new house.'

C2	Top	Foc	wh/C1	NEG	V+v+T	XP	YP	ZP
	alan	xæzar			araži	alan	xæzar	
kæj	alan	xæzar	kæj		araži	alan	xæzar	
sæmæj	alan	xæzar	sæmæj		araža	alan	xæzar	

Deriving clause internal effect



Deriving clause internal effect

- (69) ??? araži nog xæzar alan. VOS
 builds new house Alan

Postverbal XPs are in their base-generated positions, hence the OS order impossible

Deriving clause internal effect

Other phenomena related to the postverbal (=base) position:

- clitic doubling

(70) alan næm ærbasid maxmæ.
 A. ENCL.1PL.LAT come.PST.3SG we.LAT

'Alan came to us.'

- quantifier float

(71) adæmæj ærbasidišti birætæ.
 people.ABL come.PST.3PL many

'Many people came.'

Conclusion

- The preverbal position in Ossetian is the left edge of the clause.
- The impenetrability of the verbal complex results from
 - (1) V-to-T movement;
 - (2) Neg over TP position;
 - (3) [-EPP] feature of T;
 - (4) spellout of the preverbal complementizers in Fin.
- Apparent "floating" of the verbal complex within the clause results from A'-movement of arguments from their (postverbal) base positions to TopP or FocP.