

Relative clauses in Chechen

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1. Relative clauses

1.1. Conventions

See example (1):

<i>relative clause</i>	The part between brackets: <i>[that my father had taken]</i>
<i>head noun</i>	The noun to which the relative clause is linked: <i>picture</i>
<i>relativized noun</i>	The noun that is relativized in the RC: <i>picture</i>
<i>gap</i>	Empty place left by relativized noun in RC: t
<i>resumptive</i>	Pronoun filling the gap
<i>relativizer</i>	Subordinator linking relative clause with matrix: <i>that</i>
<i>relative pronoun</i>	Pronoun linking relative clause with matrix: <i>which</i>

1) I have given the picture_i, [*that/which_i* my father had taken t], to my children.

1.2. History of research on Chechen relative clauses

Traditional grammars:

- Morphology of participle
- Relative clause agrees in case with the head noun
 - Head noun absolutive → participle has no additional suffix
 - Head noun other case → participle gets oblique case suffix *-chu*

2) *Suuna i dieshnash xae'a*
1S-DAT these word-PL-ABS know-PRS
I know these words

3) [*Sajna xu'u*] *dieshnash_i niisa swa'aala lae'a suuna*
1S-DAT know-PRS-ADJ word-PL-ABS right speak-INF want-PRS 1S-DAT
I want to pronounce the words that I know right.

4) [*Lyra hwyequ-chu*] *muoxuo dittash uoramashca swadoolura.*
fiercely blow-PRS-OBL wind-ERG tree-PL-ABS root-PL-INS hither-D-extract-IMPF
The fiercely blowing storm uprooted trees.
Tyyranash/Wolf: 2

Recent research (Nichols 1994a, 1994b, 1997, Good 2003):

- Many constituent types can be relativized:
 - Subject, Direct Object
 - Locative, Possessor, Comparative, Instrument
- Relativized noun leaves a gap in the relative clause
- Gender agreement with noun in the relative clause
- Tense restrictions on main verb in relative clause, comparable to other subordinate clause's tense restrictions (i.e. *deela*-clauses)

1.3. Status of the Chechen relative clause

Syntactic status of the Chechen relative clause:

- It has tense (present, past, future – several compound tenses) → IP
- It does not completely coincide with AdjP (Adjectival Phrases)

- For the moment I argue to regard it as a CP.
 - Auxiliary *du* has a matching participial form *dolu*.
 - The *-l* suffix is used in other subordinators (see Table 1, category X).
 - Regard *dolu* as a phonological merger of IP head (auxiliary) and CP head (relativizer).
 - But note:
 - Participle forms of simple verbs don't show an overt relativizer
 - Negative participial form *doocu* of auxiliary *daac* does not show overt relativizer

Table 1 Several verbal suffixes

Type	Infinitive	Meaning	Class	Root	QM	X	Neg	Mood	Example
Present condition		(auxiliary)	<i>b-</i>			<i>-el-</i>		<i>-ahw</i>	<i>belahw</i>
Present condition		(auxiliary)	<i>d-</i>				<i>-aac-</i>	<i>-ahw</i>	<i>daacahw</i>
Present condition	<i>dita</i>	leave	<i>v-</i>	<i>-it-</i>				<i>-ahw</i>	<i>vitahw</i>
Counterfactual condition		(auxiliary)	<i>d-</i>			<i>-el-</i>		<i>-ahwaara</i>	<i>delahwaara</i>
Counterfactual desire		(auxiliary)	<i>v-</i>			<i>-el-</i>		<i>-ara</i>	<i>velara</i>
Volitive/Subjunctive	<i>gan</i>	see		<i>go-</i>	<i>-j-</i>	<i>-la</i>			<i>gojla</i>
Subjunctive		(auxiliary)	<i>d-</i>		<i>-j-</i>	<i>-la</i>			<i>dujla</i>
Volitive	<i>xila</i>	be/happen		<i>xil-</i>	<i>-ii-</i>	<i>-la</i>			<i>xyliila</i>

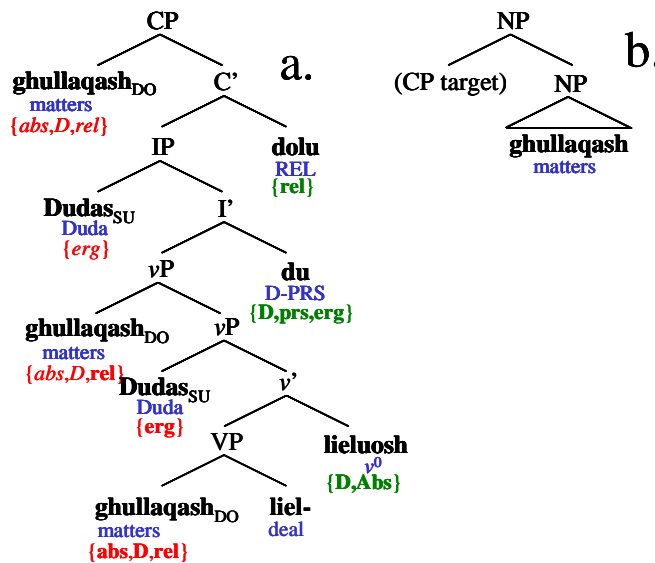
1.4. Syntax of the Chechen relative clause

Take as basis the relative clause in (5). With directionality approach Figure 1.

- 5) [Dudas _{ERG} *ṭ* lieluosh _{PTC} *dolu*] ghullaqash_i
 DUDA-ERG deal-PRS-PTC D-REL matter-PL-ABS
the things Duda was dealing with.
 Baduev 1991:25

Framework: minimalism (Chomsky 1995, Hornstein 2005).

Figure 1 Formation of relative clause using the directionality approach



At spell-out chain reduction is applied as shown in (6).

- 6) [NP_{CP} ghullaqash_{DO} [IP Dudas_{SU} [VP ghullaqash_{DO} Dudas [VP ghullaqash_{DO} lieluosh_v lieluosh_v+v⁰] lieluosh_v+v⁰+I⁰] lieluosh_v+v⁰+dolu_i] ghullaqash_{DO}]

2. Resumptives

2.1. Examples

Take sentence (7), and then relativize the recipient of the land. This results for instance in (8). When a resumptive (here the reflexive pronoun *shiena*) is used to fill the gap, the result can be as in (9).

7) Kilaaba cunna dika laatta dwaadelira.
Caleb-ERG 3S-DAT good land- ABS away-D-give-RFPS
Caleb gave him good land.

8) [Kilaaba ʔ dika laatta dwaadella volu] stag hinca cigahw
Caleb-ERG good land- ABS away-D-give-NRPS V-REL person-ABS now there
vaaxa uohwaxi'ira.
V-live-INF down-sit-RFPS
The person_i [to whom_i Caleb gave good land], has now settled down to live there.

9) [Shiena_i Kilaaba dika laatta della volu] stag
3S.RFL-DAT Caleb-ERG good land- ABS D-give-NRPS V-REL person-ABS
as dwaatettira.
1S-ERG away.push-RFPS
I rejected the person_i [to whom_i Caleb gave good land].

Note:

- A reflexive pronoun is used (this is a case of Long Distance Anaphor, since the link crosses a CP boundary)
- Usage is optional
- The relativized noun does not have to be the subject of the relative clause (in this case it is the indirect object)
- The head noun does not necessarily have to be the subject of the matrix clause (here it is the absolutive case direct object)
- Word order (both relative clause as well as matrix clause) plays a role, since for instance (10) is rejected.

10) *[Kilaaba shiena_i dika laatta dwaadella volu] stag
Caleb-ERG 3S.RFL-DAT good land- ABS away-D-give-NRPS V-REL person-ABS
as dwaatettira.
1S-ERG away.push-RFPS
I rejected the person_i [to whom_i Caleb gave good land].

Resumptive is also possible when the relativized noun is subject (11), when it is a possessor (13), an object of various adjuncts, like locative, comparative (15), postpositional phrase (14), but not when it is the direct object (12).

11) [(Shaa_i) cynga xi maliitina jolu] Rebiqa_i
3S.RFL-ERG 3S-ALL water-ABS let.drink-NRPS J-REL Rebecca-ABS
ch'oogha macjelira.
very hunger-J-RFPS
Rebecca_i, [who_i had made him_i drink water], became very hungry.

12) *[Muusana_k shaa_i sielxana ginchu] staga_i cunax_k laecna dyycura
Musa-DAT 3S.RFL-ABS yesterday see-PST-OBL man-ERG 3S-MAT about D-speak-IMPF
The man_i, who_i had seen Musa_k yesterday, spoke about him_k.

13) [[shien_i Majra] vella jolu] zuda_i maarie jaxara
3S.RFL-GEN husband-ABS V-die-NRPS J-REL woman-ABS marriage-ALL J-go-PST
The woman, whose husband had died, married.

- 14) [[shiena_i t'iehw] daarix dina duuxar dolu] zuda_i jara cigahw
 3S.RFL-DAT on silk-MAT D-make-NRPS clothing.D D-REL woman.J J-was there
The woman_i, who_i had clothes made from silk, was there.
- 15) [[shiel leqa] majra volchu] zudchynga_ixi maliitira as
 3S.RFL-CMP tall husband-ABS V-REL woman-ABS water-ABS let.drink-RFPS 1S-ERG
I let the woman_i, whose_i husband is taller than her_i, drink water.

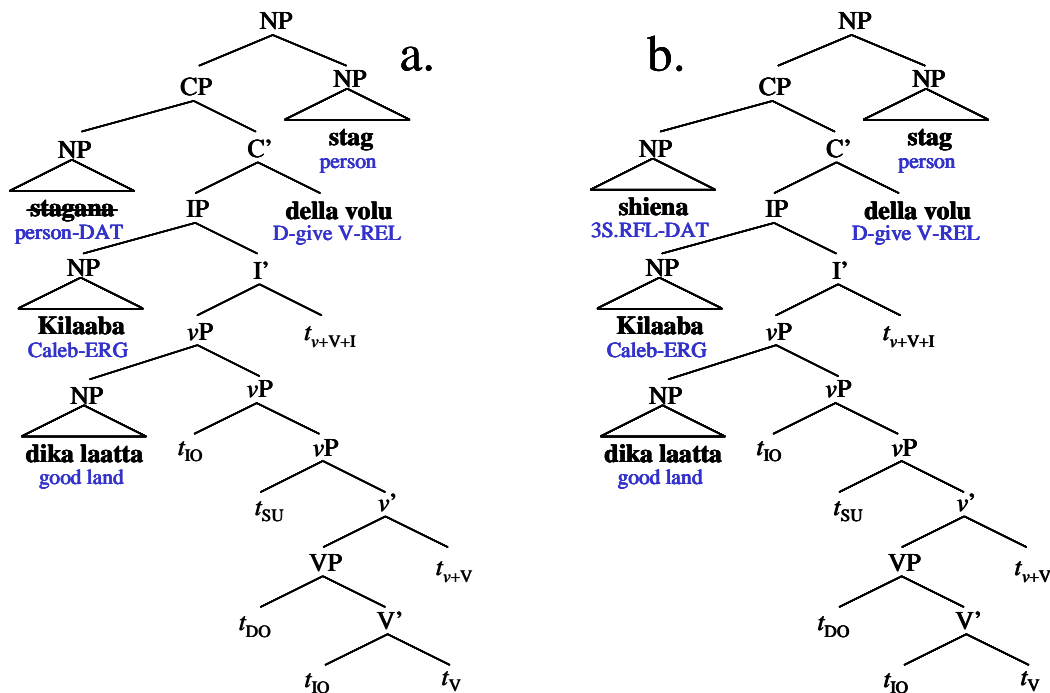
But *not* every reflexive inside a relative clause is a *resumptive*, see (16) and (17).

- 16) [[shiel_i zhimax] volu jaalx vasha_k swavaaliira Alxasta_i
 3S-CMP small-CMP V-REL six brother-ABS hither-D-bring-RFPSAlxast-ERG
Alkhas_t, brought the six brothers_k, who_k were younger than he_i.
 Kamina 2007
- 17) [[shiel_i zhimax] volu Zulaj_n jaalx vasha_k swavaaliira Alxasta_i
 3S-CMP small-CMP V-REL Zulaj-GENSIX brother-ABS hither-D-bring-RFPSAlxast-ERG
Alkhas_t, brought the six brothers_k of Zulay_n, who_k were younger than he_i.

2.2. Syntax

The difference between clauses *with* and *without* resumptives can be explained straightforward by assuming that they are base-generated. See Figure 2.

Figure 2 Formation of relative clause using the directionality approach



2.3. Hierarchy

Keenan and Comrie: "accessibility hierarchy" (1977).

(1) Accessibility Hierarchy

Subject > Direct Object > Indirect Object > Object of a post- or prepositional phrase > Possessor > Object of comparison

Each element in the hierarchy is more accessible than the elements below it. E.g. if a language allows indirect objects to be relativized, it also allows direct objects and subjects to be relativized.

Chechen: relativization is possible for all the elements from the hierarchy. Resumptives are possible, except for the direct object.

2.4. Paradigm

Table 2 Usage of reflexive to fill the gap in the relative clause

Relativized noun	Head noun in matrix clause		
	Subject	Direct Object	Goal
Subject (Ergative)	(ok)	-	-
Direct Object	no	-	-
Subject ("have" clause)	ok	(ok)	-
Possessor	ok	(ok)	-
Subject (Dative)	ok	ok	ok
Indirect Object	ok	ok	-
Goal	-	ok	-
Adjunct object	yes	yes	yes

3. Extraposition

Normally relative clauses appear to the *left* of the head noun, as part of the noun phrase. Extraposed relative clauses occur to the *right* of the head noun (18).

18) San Syelzha-ghaala uohwavaan diezara, [t'amuo t̄ juoxiinachu].
 1S-GEN Grozny-city-ALL down-V-come-INF D-need-IMP war-ERG J-destroy-NRPS-OBL
I had to come down to the city Grozny, which was destroyed by the war.
 Beksultanov/Boqq'alchux Bieguosh

- Extraposition is only observed *clause-final*.
- There is some kind of connection with focus

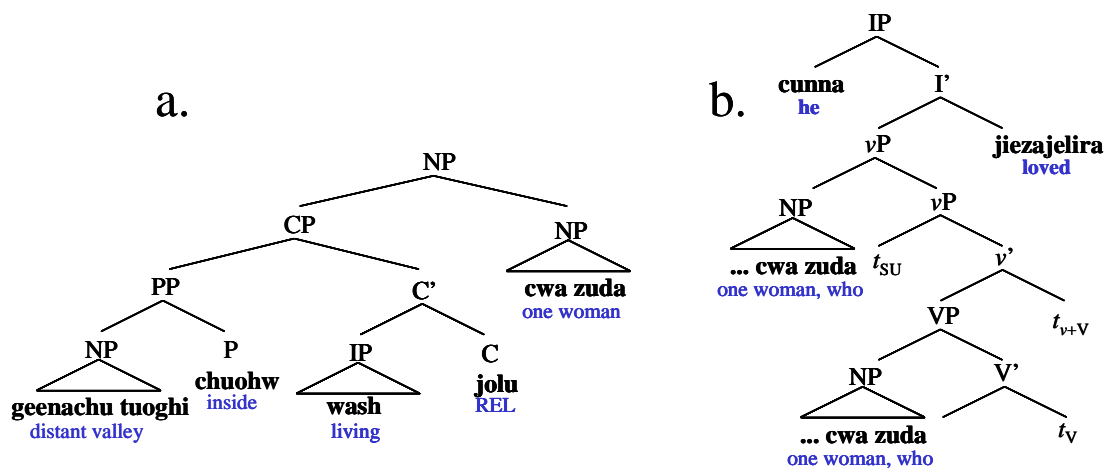
3.1. Focus and extraposition

Take as basic sentence the one in (19).

19) Cunna cwa zuda jiezajelira, [geenachu tuoghi chuohw wash jolu]
 3S-DAT one woman-ABS J-love-RFPS distant-OBL valley-DAT inside live-PRS-PTC J-REL
He fell in love with a woman that lived in a distant valley

Extraposition is not possible when there is no focus, as in Figure 3.

Figure 3 Extraposition not possible without additional projections



Test for combination between focus and extraposition. Evaluate native speaker opinion about OVS variant of sentence (19): [_{FocP} OV [_{IP} S [_{VP} *t*_O]] making the following variations:

- Relative clause in normal position versus extraposed (sentence final).
- Plain direct object (i.e: one woman) versus direct object containing a *wh*-question word (i.e: which woman? and who?).
- Relative clause with normal locative versus locative replaced by question word 'where?'

Table 3 Acceptability of question words in relative clause

#	Order			Eval
a	O	V S	O _{RC}	ok
b	O _q	V S	O _{RC}	ok
c	O _q	V S	O _{RC,q}	*
d	O	V S	O _{RC,q}	*
e	O _{RC} +O	V S		ok
f	O _{RC} +O _q	V S		ok
g	O _{RC,q} +O _q	V S		ok
h	O _{RC,q} +O	V S		ok

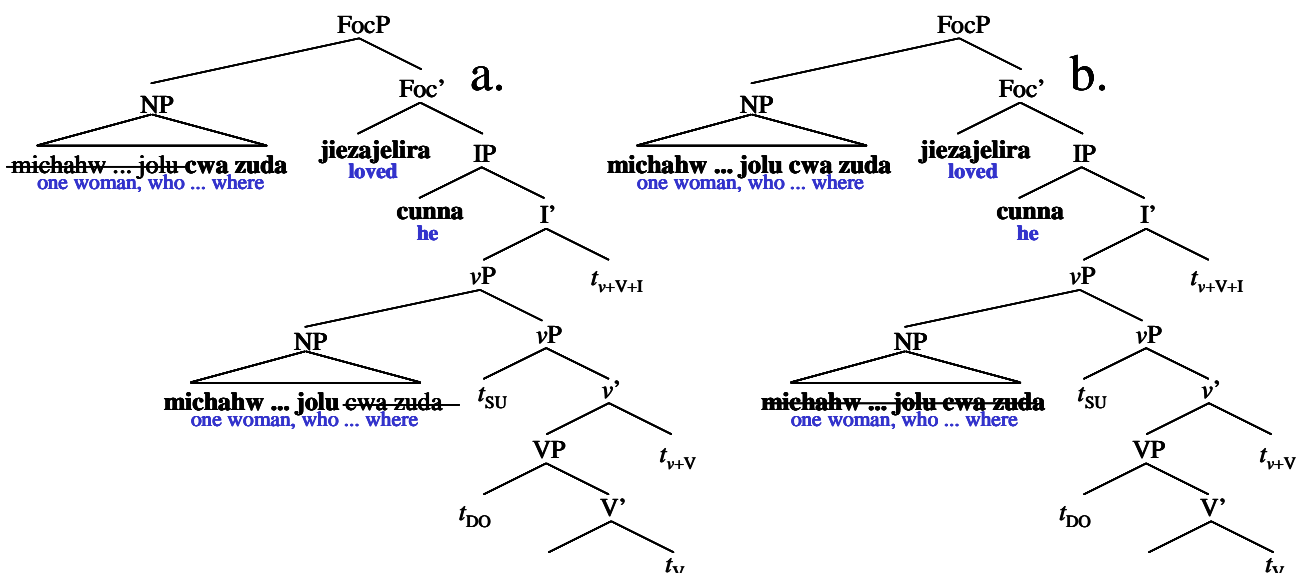
Conclusions:

- Extraposition is only allowed when the RC does *not* contain a question word.
- Assume the question word indicates the presence of a focus feature:
 - Extraposition is only allowed when the RC does not contain a focus feature.
- This then leads to the following suggestion:
- The extraposed relative clause must be stranded somewhere in IP, i.e. not in a focus projection.

3.2. Raising analysis and extraposition

Consider the raising analysis for extraposed relative clauses as shown in Figure 4.

Figure 4 Raising analysis for extraposed relative clauses

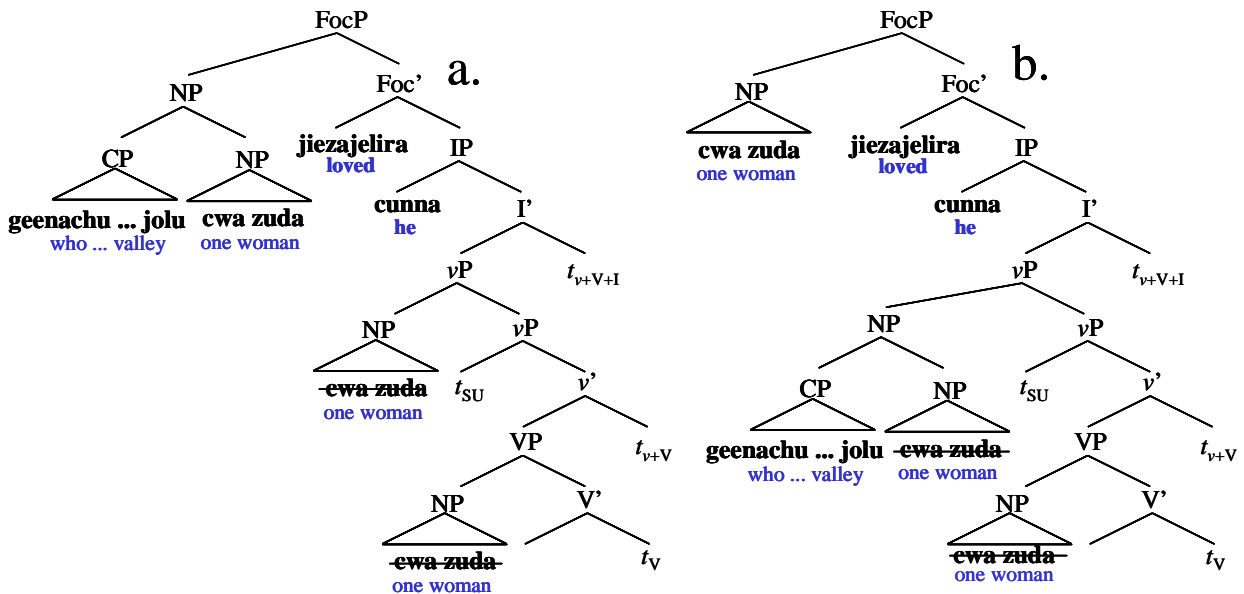


Selectively crossing off relative clause and head noun only works (see *a, b, c* and *d* in Table 3), when the relative clause does not contain a *wh*-question word. Raising analysis is then problematic.

3.3. Adjunct analysis and extraposition

Consider the adjunct analysis for extraposed relative clauses as shown in Figure 5 (Henderson 2007).

Figure 5 Adjunct analysis for extraposed relative clauses



- When the relative clause contains a focus feature, then there is no extraposition, as in (a) of Figure 5. The relative clause CP is adjoined to the NP containing the head noun.
- When the head noun contains a focus (or topic) feature, but the relative clause as such not, then it adjoins to the copy of the argument inside the IP. The argument NP itself is in the focus (or topic) projection, and at spell-out is pronounced over there.

4. Conclusions

- Analysis:
 - The *adjunct* analysis provides an adequate syntactic description.
 - The *raising* analysis does not.
- Resumptives:
 - Reflexive pronouns can optionally be used as resumptives.
 - Direct objects don't allow their gap to be filled with a resumptive.
 - Accessibility hierarchy not completely suitable for resumptives.
 - Resumptive syntax: base generated.
- Extraposition:
 - Extraposed relative clause does *not* contain a focus feature.
 - When there is extraposition, then the head noun is topic or focus.
 - Syntax: the extraposed relative clause adjoins to the argument position where it is pronounced at spell-out.

5. Challenges

- Why no resumptives for direct object?
- Word order restrictions in relative clause.
- Noun-class agreement puzzle.

6. Acknowledgments

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9. Appendix

AP	adjectival phrase or adjunct	NML	nominalizer (verb to noun)
B-	class-prefix B on the verb	NP	noun phrase
CP	complementizer phrase	NRPS	non-referential past. Used for past verbal adverbs and past verbal adjectives. Fairy tail matrix verbs also have this tense.
D-	class-prefix D on the verb	PL	plural
DAT	dative case	PRS	present tense
ERG	ergative case	PTC	participial form (verbal adverb)
FUT	future tense	RFPS	referential past. Sometimes also called the "witnessed past". Usually matrix verbs in a narrative are in this tense.
GEN	genitive case	V-	class-prefix V on the verb
GOAL	goal case marking	VP	verb phrase
IMPF	imperfective past tense		
INS	instrumental case		
J-	class-prefix J on the verb		
LOC	locative case		
NEG	negator		

10. Word order restrictions

Native speakers were asked to evaluate the acceptability of sentences with different word orders within their relative clauses. The role of the head noun was varied from intransitive subject in (20) to direct object in (21). Here IO_{res} is the reflexive indirect object pronoun, functioning as resumptive.

- 20) [Kilaaba shiena_i dika laatta dwaadella volu] stag
 Caleb-ERG 3S.RFL-DAT good land- ABS away-D-give-NRPS V-REL person-ABS
 cigahw vaaxa uohwaxi'ira.
 there V-live-INF down-sit-RFPS
The person_i [to whom_i Caleb gave good land], has settled down to live there.

- 21) [Kilaaba shiena_i dika laatta dwaadella volu] stag
 Caleb-ERG 3S.RFL-DAT good land- ABS away-D-give-NRPS V-REL person-ABS
 gira suuna sielxana.
 see-RFPS 1S-DAT yesterday
Yesterday I saw the person_i [to whom_i Caleb gave good land].

The results of the native speaker's evaluation is in Table 4.

Table 4 Word order restrictions in relative clause with ditransitive verb

Order in RC	S _A	O _A	Ref	Order in RC	S _A	O _A
S _E O V	ok	ok		O S _E V	?	?
IO _{res} S _E O V	ok	ok		IO _{res} O S _E V	?	ok
S _E IO _{res} O V	?	ok	20), 21)	O IO _{res} S _E V	ok	??
S _E O IO _{res} V	?	ok		O S _E IO _{res} V	ok	?

Native speakers were also asked to evaluate the acceptability of a slightly different kind of sentences as shown in (22) and (23). Here the verb was a causativized transitive one. Results are in Table 5. Here G_{res} stands for the causee (a resumptive).

- 22) [Rebiqas shiega xi maliitina volu] stag
 Rebecca-ERG 3S-ALL water-ABS let.drink-NRPS V-REL man-ABS
 cigahw laettash vara.
 there stand-PTC V-PST
The person, [whom_i Rebecca had made drink water], was standing over there.

- 23) [Rebiqas shiega xi maliitina volu] stag
 Rebecca-ERG 3S-ALL water-ABS let.drink-NRPS V-REL man-ABS
 gira suuna sielxana.
 see-RFPS 1S-DAT yesterday
Yesterday I saw the person, [whom_i Rebecca had made drink water].

Table 5 Word order restrictions in relative clause with causative verb

Order in RC	S _A	O _A	Ref	Order in RC	S _A	O _A
S _E O V	ok	ok		O S _E V	no	no
G _{res} S _E O V	ok	ok		G _{res} O S _E V	no	no
S _E G _{res} O V	ok	?	22), 23)	O G _{res} S _E V	no	no
S _E O G _{res} V	no	?		O S _E G _{res} V	no	no

11. Noun-class agreement puzzle

The question here is: the main verb of the relative clause agrees in noun class with which argument?

Distinction needs to be made between two cases. The first situation is where the main verb of the relative clause is simple (it is either a simple verb or the auxiliary). In

this situation agreement is as shown in Table 6. In all these cases the agreement is with an argument in the absolutive case inside the relative clause, be it overtly present (in 2-5 and 7) or be it the gap of the relativized noun (in 1 and 6).

Table 6 Agreement of simple verb

#	What is relativized?	Vb/Tense	Participial agrees in noun-class with:					
			Argument in RC		Gap in RC		Head noun in MC	
			Case	Function	Case	Function	Case	Function
1	Subject of intransitive	aux	-	-	abs	subject	gen	about
2	Subject of transitive	simple	abs	object				
3	Possessor of locative	aux	abs	subject	-	-	-	-
4	Object of postposition	aux	abs	object	-	-	-	-
5	Subject of "have" clause	aux	abs	subject	-	-	-	-
6	Object of "have" clause	aux	-	-	abs	direct object	abs	subject
7	Object of comparison	aux	abs	subject	-	-	-	-

The second situation is the most challenging one. In this case the main verb of the relative clause is a compound one. Its first part is a simple verb, which agrees in noun class with an absolutive case argument inside the relative clause. Its second part is the participial auxiliary. What this word agrees with in noun-class varies, as shown in Table 7.

Table 7 Agreement of auxiliary from compound verb

#	What is relativized?	Vb/Tense	Participial auxiliary agrees in noun-class with:					
			Argument in RC		Gap in RC		Head noun in MC	
			Case	Function	Case	Function	Case	Function
1	Subject of transitive	cmpd/pst	-	-	erg	subject	abs	subject
2	Subject of transitive	cmpd/pst	-	-	dat	subject	all	causee
3	Direct object	cmpd/prs	-	-	dat	direct object	abs	subject
4	Indirect object	cmpd/pst	-	-	dat	indirect object	abs	subject
5	Possessor of subject	cmpd/pst	-	-	gen	possessor	abs	subject
6	Possessor of subject	cmpd/pst	-	-	gen	possessor	abs	object
7	Goal in intransitive clause	cmpd/prs	-	-	dat	recipient	abs	object
8	Goal in intransitive clause	cmpd/prs	abs	subject	-	-	-	-
9	Goal in intransitive clause	cmpd/fut	abs	subject	-	-	-	-
10	Possessor of locative	cmpd/pst	-	-	gen	possessor	abs	subject

Note in particular the minimal pair formed by (numbers 7 and 8 in Table 7), which are shown here as (24) and (25).

24) [Shien_i i baaxam qoochush bolu] stag_i ooxa vyyr vu
 3S.RFL-DAT that possession-ABS reach-PTC b-REL person-ABS 1P.EXC-ERG V-kill-FUT V-PRS
We will kill the person who inherits the possessions.

25) [Shien_i i baaxam qoochush volu] stag_i ooxa vyyr vu
 3S.RFL-DAT that possession-ABS reach-PTC v-REL person-ABS 1P.EXC-ERG V-kill-FUT V-PRS
We will kill the person who inherits the possessions.