

Three argument hierarchies in West Circassian and how movement can explain them

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The premise: Contradictory argument hierarchies

West Circassian displays **ergative alignment** in case and verbal indexing.

Various parts of the grammar are sensitive to different argument hierarchies:

- Reciprocals: syntactic ergativity (+ parasitic gaps)

$S/O(\text{ABS}) > A(\text{ERG}) > IO$ $\rightsquigarrow$ “surface subjecthood”
subject > **agent** > **indirect object**

- Reflexives, nominalizations: syntactic accusativity (+ control)

$A(\text{ERG}) + S(\text{ABS}) > O(\text{ABS})/IO$ $\rightsquigarrow$ thematic hierarchy
agent > **patient/theme/goal/etc.**

(Ershova 2019, 2020, 2021, 2023)

Syntactic subjecthood vs. thematic prominence

Possible explanation:

Not all grammatical rules are sensitive to syntactic structure.

(e.g. Letuchiy 2010)

For example:

- ▶ Reflexive binding and control are determined in the semantic (or deep syntax) component, not in the surface syntax.
- ▶ Surface syntax: ABS is the subject.
- ▶ Semantic/thematic hierarchy: agent is most prominent.
(Fillmore 1968, 1971; Grimshaw 1990; Van Valin 1990, etc.)

↪ modular organization of the grammar

E.g. LFG (Dalrymple 1993 a.o.) and HPSG (Pollard and Sag 1994, a.o.).

The problem: inverse predicates

Inverse predicates:

(Rogava and Keraševa 1966, 98; Smeets 1992, 122-123; Arkadiev et al. 2009, 64-65)

- ▶ bivalent (ABS and IO)
- ▶ IO = experiencer/possessor
- ▶ ABS = theme

I forgot **you**.

IO **ABS**

EXP **TH**

Reflexives (and control): both arguments behave like a subject

- ▶ IO binds ABS
- ▶ ABS binds IO

IO **ABS**
I forgot **myself**.
Myself forgot **me**.

The problem with inverse predicates

Typology and theory:

- ▶ To explain reflexive binding, EXPERIENCER and THEME must be unranked.
- ▶ However, all thematic hierarchies (afaik) rank $EXP > TH$.

Language internal contradiction:

- ▶ West Circassian has grammatical rules which rank $EXP > TH$.

Order of arguments in nominalizations (Ershova 2020):

EXP	TH	verb
* TH	EXP	verb

The problem: at least 3 argument hierarchies

“surface syntax”	ABS > IO	reciprocals
???	ABS = IO	reflexives
thematic hierarchy	IO > ABS	nominalizations

Solution

- ▶ No modules, syntax all the way down.
- ▶ Thematic hierarchy = initial syntactic positions of arguments (Baker 1988; Kiparsky 1997; Larson 1988, a.o.).
- ▶ Other hierarchies are derived through movement.

Background on West Circassian

Syntactic ergativity vs. thematic hierarchy

Inverse predicates

The solution

Background on West Circassian

Syntactic ergativity vs. thematic hierarchy

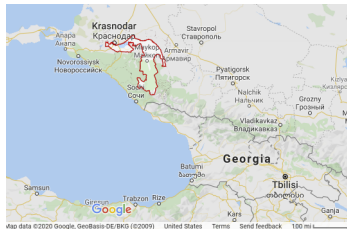
Inverse predicates

The solution

West Circassian

West Circassian (or Adyghe):

- ▶ Northwest Caucasian
- ▶ Republic of Adygea, Russia
- ▶ agglutinating, polysynthetic
- ▶ ergative case and agreement



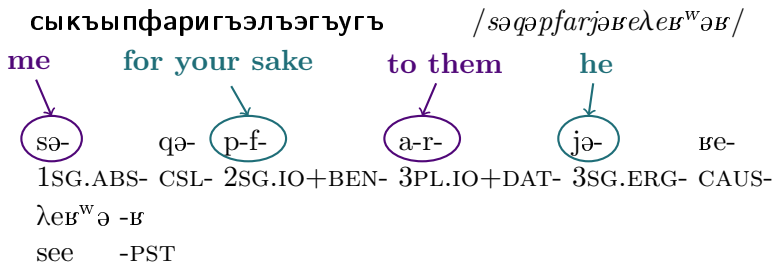
Data:

- ▶ fieldwork on the **Temirgoy dialect** in the Shovgenovskiy district of Adygea (2017-2019)
- ▶ West Circassian Corpus by Timofey Arkhangel'skiy, Irina Bagirokova, Yury Lander, and Anna Lander (<http://adyghe.web-corpora.net/>)
- ▶ Published work: Ershova 2019, 2020, 2023

Disclaimer: Glossing and segmentation may be simplified for exposition.

West Circassian is polysynthetic

Head marking and pro-drop:



‘He showed me to them for your sake.’

(Korotkova and Lander 2010, 301)

Order of cross-reference markers:

ABS- (IO+APPL-)* ERG-

Case marking

-r (ABS):

- S
- O

мы пшъашъэр дахэу къашъо

mə pšaše-**r** daxew qaš^we
this girl-**ABS** well dances

‘This girl dances well.’

-m (OBL):

- A
- applied object (IO)
- + complements of P
- + possessors

сабыйхэм хьахэр къалъэгъугъ

sabəjxe-**m** haxe-**r** qaləw^wəv
children-**OBL** dogs-**ABS** saw

‘The children saw the dogs.’

мафэ къэс еджап1эм сэк1о

mafe-qes ježape-**m** sek^we
day-each school-**OBL** go

‘I go to school every day.’

Case marking on possessors

пшъашъэм ипшъэшъэгъу

p̂sâse-**m** Ø-jə-p̂sêseɣ^w

girl-**OBL** 3SG.PR-POSS-female.friend

‘the girl’s friend’

Roadmap

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Reciprocals, reflexives and nominalizations

Diagnostics for argument asymmetries:

Valency type

ERG-ABS

ABS-IO

Reciprocal binding

ABS > **ERG** **ABS** > **IO**

Reflexive binding

ERG > **ABS** **ABS** > **IO**

Linear order in nominalizations

ERG > **ABS** **ABS** > **IO**

- ▶ With most types of predicates (transitive, bivalent intransitive) two hierarchies are sufficient.
- ▶ The picture becomes more complicated with inverse predicates (**TBD**).

Reciprocal and reflexive morphology

- ▶ Specialized morphemes appear in cross-reference slot for bound argument.
- ▶ Do not affect transitivity: same indexing and case marking as without reciprocal/reflexive. → **Appendix A**

(Ershova 2019, 2023; Letuchiy 2010)

ABS-IO verbs: ABS binds IO

шъукъыддэшъоцт

(Ershova 2023)

š^wə- qə- d- de- š^we -š't
2PL.ABS- CSL- 1PL.IO- COM- dance -FUT

'You(pl) will dance with us.'

BASELINE

укъыздэшъожъы

wə- qə- z- d- e- š^we -ž'ə
2SG.ABS- CSL- REFL.IO- COM- DYN- dance -RE

'You are dancing with yourself.'

REFLEXIVE

ABS-IO verbs: ABS binds IO

шъукъыддэшъоцт

(Ershova 2023)

ŝ^wə- qə- d- de- ŝ^we -š't
2PL.ABS- CSL- 1PL.IO- COM- dance -FUT

'You(pl) will dance with us.'

BASELINE

тыкъызэдэшъо

tə- qə- ze- d- e- ŝ^we
1PL.ABS- CSL- REC.IO- COM- DYN- dance

'We are dancing with each other.'

RECIPROCAL

+ ERG binds IO (**Appendix B**)

Predicted by both hierarchies:

Syntactic ergativity: **ABS** > **ERG** > **IO**

Thematic hierarchy: Agent(**ABS/ERG**) > Loc/Ben/Com/etc.(**IO**)

ERG-ABS verbs: two hierarchies emerge

шъутлъэгъугъ

(Ershova 2023)

ŝ^wə- t- λeɸ^wə -ɸ
2PL.ABS- 1PL.ERG- see -PST

‘We saw you(pl).’

BASELINE

зытлъэгъугъ

zə- t- λeɸ^wə -ɸ
REFL.ABS- 1PL.ERG- see -PST

‘We saw ourselves.’

REFLEXIVE: ERG > ABS

тэзэрэлъэгъугъ

te- zere- λeɸ^wə -ɸ
1PL.ABS- REC.ERG- see -PST

‘We saw each other.’

RECIPROCAL: ABS > ERG

Syntactic ergativity vs. thematic hierarchy: summary

Grammatical rules in West Circassian are sensitive to two distinct argument hierarchies:

- ▶ Syntactic ergativity: **ABS** > **ERG** > **IO**

→ **reciprocals**

- ▶ Thematic hierarchy:

Agent(**ABS**/**ERG**) > Ben/Loc/Com(**IO**), Theme(**ABS**)

→ **reflexives**

+ **argument encoding in nominalizations**

Nominalizations: basic structure

(Ershova 2020)

- ▶ arguments as possessors or incorporated
- ▶ no verbal cross-reference marking → possessor indexing

лагъэхэр сэтхьак1ы

laɤe-xe-r Ø- s- e- thač'ə **FINITE**
dish-PL-ABS 3ABS- 1SG.ERG- DYN- wash
'I am washing dishes.'

уилэгъэ тхьак1ык1э

wjə- leɤe- thač'ə -č'e **NOMINALIZATION**
2SG.POSS- dish- wash -NML
'your manner of washing dishes'

Argument encoding in nominalizations

Arguments are strictly ordered in accordance with the thematic hierarchy:

Rule for argument encoding in nominalizations

The less agentive argument must appear closer to the root than the more agentive argument.

<u>Valency class</u>	Agent		Theme/Goal/Location...	Verb+NML
ERG-ABS:	ERG	>	ABS	
ABS-IO:	ABS	>	IO	(Appendix C)

(Ershova 2020)

ERG Agent appears farther from root than ABS theme

мы пшъашъэм лагъэхэр етхъак1ы

mə p̄sâše-m(ERG) laɣe-xe-r(ABS) Ø-j-e-thač'ə

this girl-ABS dish-PL-ABS 3ABS-3SG.ERG-DYN-wash

'This girl is washing the dishes.'

пшъэшъэ лэгъэ тхъак1ык1эр

#лэгъэ пшъэшъэ тхъак1ык1эр

ERG- ABS-

✓ p̄sêše- leɣe- thač'ə -č'e -r
girl- dish- wash -NML -ABS

ABS- ERG-

leɣe- p̄sêše- thač'ə -č'e -r
dish- girl- wash -NML ABS

'the girls' manner of dish-washing' (Ershova 2020, 461-462)

ERG-ABS verb:
Order of arguments

ERG-ABS-Root

* ABS-ERG-Root

Syntactic ergativity vs. thematic hierarchy: summary

Grammatical rules in West Circassian are sensitive to two different argument hierarchies:

1. Syntactic ergativity: **ABS** > **ERG** > **IO**

→ **reciprocals**

2. Thematic hierarchy:

Agent(**ABS**/**ERG**) > Ben/Loc/Com(**IO**), Theme(**ABS**)

→ **reflexives**

→ **argument encoding in nominalizations**

... except not quite.

→ **inverse verbs**

Roadmap

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The solution

The problem for the thematic hierarchy

Inverse verbs: **IO** experiencer/possessor + **ABS** theme

сыпщыгъупшагъ

Theme Exp

sə- **p-** š'ə- Ɂ^wəpša -Ɂ

1SG.ABS- **2SG.IO-** LOC- forget -PST

'You forgot about me.'

Three hierarchies:

Reciprocals: **ABS** > **IO** syntactic ergativity /
 (Appendix D) "surface subjecthood"

Reflexives: **ABS** = **IO** ???

Nominalizations: **IO** > **ABS** thematic hierarchy

Theme Exp

sə- p- š'ə- ʋ^wəpša -ʋ
1SG.ABS- 2SG.IO- LOC- forget -PST

'You forgot about me.'

к1алэм инэнэцыгъупшэн

EXP(IO) **THEME(ABS)**

č'ale-m jə- nene- š'ə- ʋ^wəpše -n
boy-OBL 3SG.POSS- grandmother- LOC- forget -NML

'the boy's forgetting grandmothers'

* 'grandmothers' forgetting the boy'

* **THEME(ABS)** **EXP(IO)**

Reflexives: IO = ABS

сыпщыгъупшагъ

BASELINE

Theme Exp

sə- p- š'ə- ɞ^wəpša -ɞ
1SG.ABS- 2SG.IO- LOC- forget -PST

'You forgot about me.'

зысщыгъупшэжъыгъ

REFLEXIVE: IO > ABS

zə- s- š'ə- ɞ^wəpše -ž'ə -ɞ
REFL.ABS- 1SG.IO- LOC- forget -RE -PST

сызщыгъупшэжъыгъ

REFLEXIVE: ABS > IO

sə- z- š'ə- ɞ^wəpše -ž'ə -ɞ
1SG.ABS- REFL.IO- LOC- forget -RE -PST

'I forgot about myself.'

(Ershova 2023)

Inverse verbs: the takeaway

Reflexives mostly follow the thematic hierarchy, but not quite:
with inverse predicates, EXPERIENCER and THEME are equally ranked.

The problem:

- ▶ Not expected based on any thematic hierarchy.
- ▶ Contrast with argument order in nominalizations:

EXPERIENCER > THEME → as expected!

Roadmap

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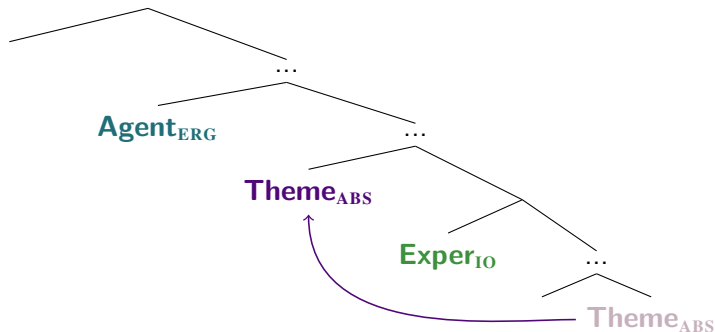
The solution in a nutshell

- ▶ No modularly defined hierarchies.
 - They won't work anyway!
- ▶ Argument hierarchy = relative positions in a tree.
- ▶ Additional ingredient: **ABS argument moves twice.**

Result: All 3 hierarchies can be captured with 1 tree.

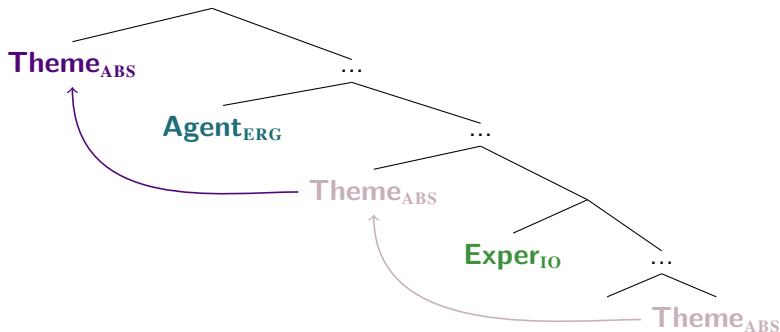
A movement-based solution

1. thematic hierarchy **ERG** > **IO** > **ABS** (nominalizations)
2. ABS movement #1 **ERG** > **ABS** = **IO** (reflexives)



A movement-based solution

1. thematic hierarchy **ERG** > **IO** > **ABS** (nominalizations)
2. ABS movement #1 **ERG** > **ABS** = **IO** (reflexives)
3. ABS movement #2 **ABS** > **ERG** > **IO** (reciprocals)



Correct predictions

- ▶ The tree is built on the thematic hierarchy — where arguments are first introduced.
- ▶ Add 2 steps of ABS movement.

Correctly predicts:

- ▶ Non-ABS arguments retain the same hierarchy for all 3 diagnostics:

Agent_{ERG} > **Experiencer/Location/Goal**_{IO}

- ▶ ... for reciprocals, reflexives, and nominalizations.
- ▶ Follows directly from movement-based explanation:

ERG and **IO** don't move, so their relative positions remain constant throughout the derivation.

Thank you

тхъашъуегъэпсэу!

tha- š^w- j- e- be- psew
god- 2PL.ABS- 3SG.ERG- DYN- CAUS- live

lit. 'May God let you live!'

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- ▶ This talk builds on analyses and data from Ershova 2019, 2020, 2023. See acknowledgements there.

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Reciprocal agreement does not affect transitivity

ERG binds **IO**

- ▶ REC replaces IO agreement
- ▶ ERG antecedent bears ERG case

ахэмэ 1эгубжээр зэрaтыжыы

axe-**me** ʔeg^wəbʒe-r Ø- **ze-** r- **a-** təʒ'ə
that.PL-**ERG** cup-ABS 3ABS- **REC.IO-** DAT- **3PL.ERG-** give

‘They pass the cup to each other.’

(<http://adyghe.web-corpora.net/>)

Reciprocal agreement does not affect transitivity

ABS binds **IO**

- ▶ REC replaces IO agreement
- ▶ ABS antecedent bears ABS case

сабыйхэр зэплъыжых

sabəjxe-**r** Ø- **z-** e- pləž'əx
child.PL-**ABS** 3ABS- **REC.IO-** DAT- look.PL

‘The children are looking at each other.’

ABS Agent appears farther from root than IO

мы пшъашъэр хъак1эмэ яжэ

mə pšaše-r(ABS) hač'e-me(IO) Ø-ja-že

this girl-ABS guest-PL.OBL 3ABS-3PL.IO+DAT-wait

'This girl is waiting for guests.'

хак1эмэ япшъэшъэ ежап1э

hač'e-me(ABS) ja-pšeše(IO)-je-ža-pe

guest-PL.OBL 3PL.POSS-girl-DAT-wait-NML

'the place for the guests' waiting for the girl'

not: *'the place for the girls' waiting for the guests' (Ershova 2020, 463)

ABS-IO verb: Order of arguments

AGENT(ABS) – IO – Root

* IO – AGENT(ABS) – Root

ERG-IO-ABS verbs: ERG binds IO

унэ фэсш1ыгъ

wəne Ø- Ø- fe- s- šə -ʋ
house 3ABS- **3SG.IO-** BEN- **1SG.ERG-** do -PST

'I built a house for him/her.'

BASELINE

о унэр зыфэпш1ыжъыгъ

we wəne-r Ø- zə- fe- p- šə -ž'ə -ʋ
you house-ABS 3ABS- **REFL.IO-** BEN- **2SG.ERG-** do -RE -PST

'You built a house for yourself.'

REFLEXIVE

ERG-IO-ABS verbs: ERG binds IO

унэ фэсш1ыгъ

wəne Ø- Ø- fe- s- šə -ʋ
house 3ABS- **3SG.IO-** BEN- **1SG.ERG-** do -PST

'I built a house for him/her.'

BASELINE

тэ унэхэр зэфэтш1ыжбыгъ

te wəne-xe-r Ø- ze- fe- t- šə -ž'ə -ʋ
we house-PL-ABS 3ABS- **REC.IO-** BEN- **1PL.ERG-** do -RE -PST

'We built houses for each other.'

RECIPROCAL

Reciprocals: ABS > IO

сыпщыгъупшагъ

BASELINE

Theme Exp

sə- p- š'ə- ɞ^wəpša -ɞ
1SG.ABS- 2SG.IO- LOC- forget -PST

'You forgot about me.'

тызэщыгъупшэжъыгъ

RECIPROCAL: ABS > IO

tə- ze- š'ə- ɞ^wəpše -ž'ə -ɞ
1PL.ABS- REC.IO- LOC- forget -RE -PST

* зэтщыгъупшэжъыгъ

RECIPROCAL: * IO > ABS

* ze- t- š'ə- ɞ^wəpše -ž'ə -ɞ
REC.ABS- 1PL.IO- LOC- forget -RE -PST

'We forgot about each other.'