# Reciprocal binding in Adyghe & Kabardian and the Ban on Ergative Anaphors

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- A primary concern in the research on syntactically ergative languages: how to model phenomena that draw a distinction between ERG vs. ABS arguments (Polinsky 2017; Deal 2015, 2016, a.m.o.)?
- HIGH ABS analysis: the asymmetry between ERG vs. ABS is a consequence of ABS
  moving to a position that asymmetrically c-commands ERG.



 The moved ABS DP blocks a higher node (e.g. a Wh-probe) from reaching the now lower FRG DP

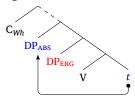
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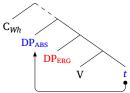
ERG cannot be reached



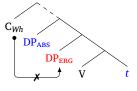
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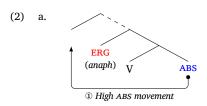


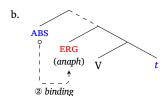


b. ERG cannot be reached



 The moved ABS DP blocks a higher node (e.g. a Wh-probe) from reaching the now lower ERG DP. Anderson (1976, a.o.; see discussion in Brodkin & Royer 2024): a prediction that
emerges from a HIGH ABS theory is that, as a consequence of ABS moving to a position
that c-commands an ERG anaphor, the former should be able to bind the latter:





• But: this prediction does not seem to be borne out by facts.

The ban on ergative anaphors

(3) In many ergative languages, anaphors cannot surface as ergative external arguments.

[Brodkin & Royer 2024]

- Anderson (1976): syntactic ergativity does not usually show up in A-type of phenomena, including binding.
- ▶ Polinsky (2017): it is restricted to Ā-phenomena.

- Reciprocal binding in Adyghe and Kabardian appears to diverge from (3).<sup>1</sup>
  - (4) a. \$\frac{s}{v}\text{-t}\Leksup \text{k}} (Adyghe)

    2PL.ABS-1PL.ERG-see-PST

    'We saw you.'

    b. te-ze-re-\Leksup \text{k}

    1PL.ABS-RECP-INSTR-see-PST}

    'We saw each other.'

    [Ershova 2023]

- (5) a. se dəя<sup>w</sup>ase wə-s-λeя<sup>w</sup>-a-š' (Kabardian)
   1SG yesterday 2SG.ABS-1SG.ERG-see-PST-IND
   'I saw you yesterday.'
  - b. de dəя<sup>w</sup>ase də-ze-rə-λeя<sup>w</sup>-a-š' 1PL yesterday 1PL.ABS-RECP-INSTR-see-PST-IND 'We saw each other yesterday.'

 $<sup>^1</sup>$ The analysis of the reciprocal prefix ze– will not be that it occupies an ERG  $\varphi$ -slot. See Proposal f Z and Appendix f Z.

• As we can see in (4a) and (5a),  $\varphi$ -prefixes in the verb crossreference ERG and ABS arguments and they occur in a particular template:

(6) 
$$\varphi$$
.ABS- $\varphi$ .ERG- $\sqrt{\dots}$ 

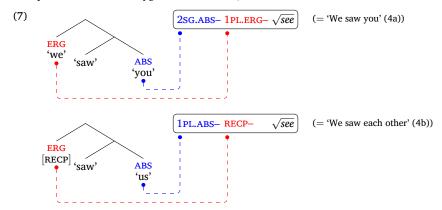
 Taken at face value, the order of verbal prefixes in (4b) and (5b) appear to indicate that, in reciprocal sentences in Adyghe and Kabardian, the RECP is above its antecedent.



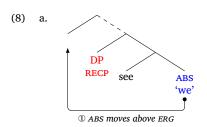
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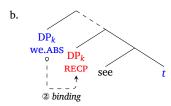
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 Ershova (2019, 2023): reciprocal binding in Adyghe provides empirical support for a HIGH ABS analysis of syntactic ergativity in this language. Binding obtains as a consequence of HIGH ABS movement of the antecedent (8).





- I argue instead that the morphosyntax of reciprocal sentences such as (4b) and (5b) is the byproduct of the interaction between:
  - ► The case properties of the RECP pronoun in these languages,
  - ▶ Independent economy principles such as Last Resort, and
  - ► Independent principles that regulate case assignment.
- RECP binding and HIGH ABS movement are, thus, independent of each other in Adyghe and Kabardian.

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  - ► Independent principles that regulate case assignment.
- RECP binding and HIGH ABS movement are, thus, independent of each other in Adyghe and Kabardian.
  - Despite appearances, reciprocal sentences in Adyghe and Kabardian also abide by The ban on ERG anaphors (3).

Adyghe and Kabardian are morphologically ergative languages.

- (9) a. <u>ç'ale-m pisme-r Ø-j-e-txə</u> (Adyghe) boy-ERG letter-ABS 3SG.ABS-3SG.ERG-DYN-write

  'The boy is writing a letter.'
  - b. Ç'ale-r Ø-ma-tx-e boy-ABS 3SG.ABS-DYN-write-AP 'The boy is writing.'

[Arkadiev & Letuchy 2011]

- Furthermore, φ-prefixes in the verb crossreference core and oblique arguments (which
  include applied arguments, indirect objects, and certain causees), in a particular
  template:<sup>2</sup>
  - (10) ABS. $\varphi$ -OBL. $\varphi$ -ERG. $\varphi$ -CAUS- $\sqrt{\ldots}$ (-3PL.ABS) [based on Letuchiy 2016]

<sup>2</sup>For particular analyses of these φ-prefixes, see Ershova (2019), Driemel et al. (2020, 2021), and Fong (In Prep.), the latter of which is summarized in the Appendix  $\mathbf{E}'$ .

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tinyurl.com/cla25sfong Reciprocal binding in Circassian

- For reasons that will become clearer, I assume a **Dependent Case** framework (Marantz, 1991), whereby case is assigned according to a *Disjunctive Hierarchy*.
- For Adyghe and Kabardian, I propose the algorithm in (11).<sup>3</sup>

 $<sup>^3</sup>$ I also assume a Contextual or Dynamic definition of phases. See discussion in Fong (In Prep.).

#### (11) Case Disjunctive Hierarchy

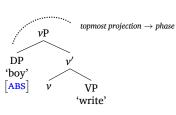
- 1 Assign any idiosyncratic lexical case (e.g. OBL).
- @ Given two nominals DP1 and DP2, such that
  - a. DP1 c-commands DP2,
  - b. neither DP1 nor DP2 has been assigned case yet, and
  - c. DP1 and DP2 are contained in the same smallest phase *Ph*, assign dependent **ERG** to DP1 if DP1 is at the edge of *Ph*, otherwise assign dependent **OBL** to DP1.
- 3 Assign unmarked ABS to any DP that has not been assigned case yet.
- At ②, DP2 is a case competitor for the assignment of dependent ERG to DP1.

(13)

• ERG/ABS transitive (9a) and ABS intransitive (9b) sentences:

(12)  $\begin{array}{c|c} & & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\ &$ 

- No lexical OBL.
- 2 Dependent ERG assigned to subject.
- Unmarked ABS assigned to object.



- No lexical OBL.
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- Unmarked ABS assigned to subject.

- ABS/OBL sentences:
  - (14) **ç'ale-r pŝaŝe-m Ø-je-**g<sup>w</sup>əpšəse guy-ABS girl-OBL 3SG.ABS-3SG.OBL-think 'The guy is thinking about the girl.'

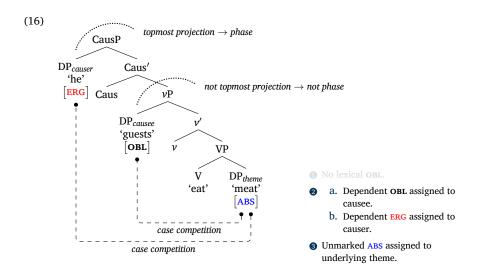
[Arkadiev & Bagirokova 2023]

- 'Think' assigns lexical OBL to object.
- No dependent ERG.
- Unmarked ABS assigned to subject.

- Dependent OBL in sentences with three DPs, e.g. causativization of transitive verb:<sup>4</sup>
  - (15) a. haç'e-xe-m lə Ø-a-šxə guest-PL-ERG meat 3SG.ABS-3PL.ERG-eat 'The guests are eating meat.'
    - b. a-š' haç'e-xe-m lə Ø-a-r-j-e-ʁa-šxə 3SG-ERG guest-PL-OBL meat 3SG.ABS-3PL.OBL-OPV-3SG.ERG-DYN-CAUS-eat 'He is making the guests eat meat.'

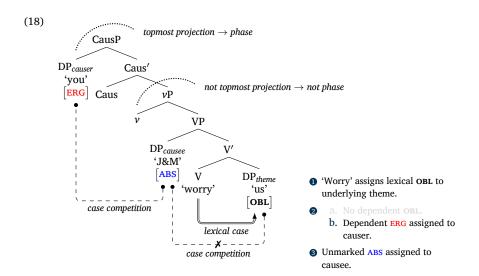
[Letuchiy 2014]

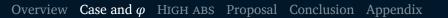
<sup>&</sup>lt;sup>4</sup>ERG and **OBL** in Adyghe and Kabardian are syncretic, a crosslinguistically common pattern (Zompì, 2019). Additionally, I also assume that **OBL** in these languages can be either lexical or dependent case. See support for this distinction in Fong (In Prep.).



That the OBL assigned to the causee in (15b) is an instance of dependent case, is
indicated by the fact that, in the absence of a viable competitor, the causee is assigned
unmarked ABS.

```
(17)
      a. [<sub>&P</sub> ž'wen-re merjə-re
                                     pro
             John-COORD Mary-COORD 1PL.OBL
         Ø-qə-t-fe-gwəmeč'ə-x
                                                               ('worry:' ABS/OBL)
         3PL.ABS-DIR-1PL.OBL-BEN-WOTTY-PL.3ABS
         'John and Mary worry about us.'
                  [&p ǯ'wen-re
                                 merjə-re
                                              pro
                     John-COORD Mary-COORD 1PL.OBL
         2sg.erg
         Ø-qə-t-fe-b-ke-gwəmecə-ke-x
         3PL.ABS-DIR-1PL.OBL-BEN-2SG.ERG-CAUS-WOTTY-PST-PL.3ABS
                                                               ('worry' causativized)
         'You made John and Mary worry about us.'
```





 Coupled with a particular proposal about the case properties of the RECP pronoun in Adyghe and Kabardian, this analysis will be shown to make correct predictions about the morphosyntax of reciprocal sentences in Adyghe and Kabardian, while also maintaining standard assumptions about binding.

#### Movement necessary for binding Teleology Double binding Interim summary

- As mentioned above, according to a HIGH ABS analysis of RECP binding in Adyghe, (4b) is analyzed as the result of the movement of the ABS antecedent to a position that is higher than the ERG antecedent.
  - (4) a. ŝwa-t-λeκwa-κ
    2PL.ABS-1PL.ERG-see-PST
    'We saw you.'
    b. te-ze-re-λεκwa-κ

1PL.ABS-RECP-INSTR-see-PST 'We saw each other.'

[Ershova 2023]

- Such a HIGH ABS analysis faces empirical and theoretical challenges:
  - Movement is a necessary condition for binding in some sentences, in divergence from similar patterns found in analogous constructions elsewhere.
  - ▶ Not all instances of RECP binding require HIGH ABS movement in Adyghe. A HIGH ABS analysis implies, thus, a teleological grammar.
  - "Double binding" predicted to be grammatical, contrary to fact.

### Movement necessary for binding Teleology Double binding Interim summary

 For transitive verbs with an ERG/ABS pattern (e.g. 'see'), the antecedent of a reciprocal must be assigned ABS (19a) and cannot be assigned the expected ERG (19b).

```
1PL.ABS 1PL.ABS-RECP-INSTR-see-PST

'We saw each other.'

b. *pro ze-re-t-λeκ"-θ-κ.

1PL.ERG RECP-INSTR-1PL.ERG-see-PST

Intended: 'We saw each other.'
```

[Ershova 2023]

• This is particularly clear when the antecedent is an overt DP:

te-ze-re-λ.eκ<sup>w</sup>ə-κ

(20) zeç'e çəf-xe-r Ø-ze-r-e-\\(\text{cgf-xe-r}\) o-ze-r-e-\\(\text{cgf-xe-r}\) all man-PL-ABS 3PL.ABS-RECP-INSTR-DYN-see-RE-3PL.ABS

'All the people see each other.' [Arkadiev & Letuchy 2011]

(19)

a.

pro

Movement necessary for binding Teleology Double binding Interim summary

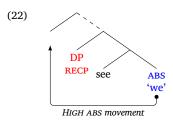
ullet Furthermore, the RECP prefix is closer to the stem. The  $\phi$ -prefix that crossreferences an ERG argument is also closer to the stem.  $^5$ 

(21) a. ABS.
$$\varphi$$
-OBL. $\varphi$ -ERG. $\varphi$ - CAUS- $\sqrt{\dots}$  (-3PL.ABS)  
b. ABS. $\varphi$ - RECP-  $\sqrt{\dots}$ 

<sup>&</sup>lt;sup>5</sup>This description is revised in the current analysis. See the Appendix ∠.

#### Movement necessary for binding Teleology Double binding Interim summary

In order to capture these morphosyntactic properties, a HIGH ABS analysis assumes that
the underlying structure of a reciprocal sentence would be as in (22), where the RECP is
base-generated above its antecedent.



- ► The antecedent would be necessarily ABS because it is a theme.
- The RECP prefix occupies an ERG  $\varphi$ -slot because it is a subject.
- Given this underlying structure, HIGH ABS movement is a necessary condition for RECP binding.

#### Movement necessary for binding Teleology Double binding Interim summary

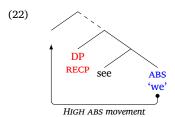
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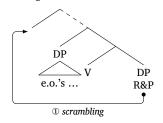
#### Movement necessary for binding Teleology Double binding Interim summary

- A-movement is well-known to create new antecedents for binding, e.g.:
  - (23) Hindi

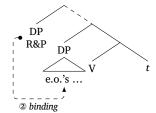
[DP raam aur prataap-ko ] ek-duusre-kii bahinõ-ne \_\_ maaraa. Ram and Pratap-ACC each.other's sisters-ERG hit Ram and Pratap1, each other1's sisters hit .'

[Keine 2018]

(24) a. Base-generation



b. Result of A-scrambling



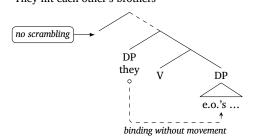
#### Movement necessary for binding Teleology Double binding Interim summary

 But even in languages where A-movement can create new antecedents for binding, movement is not a necessary condition, provided that the appropriate configuration for binding obtains:

#### (25) Hindi

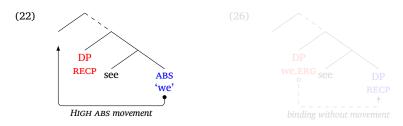
unhō-ne [DP ek-duusre-ke bhaaiyō-ko ] maaraa. they-ERG each.other's brothers-ACC hit 'They hit each other's brothers'

[M. Chaturvedi, p.c.]



#### Movement necessary for binding Teleology Double binding Interim summary

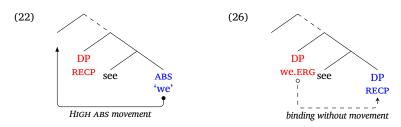
 Why, then, must the derivation of a reciprocal sentence in Adyghe have (22) as its underlying form?



• In other words, why does the underlying structure (26) result in ungrammaticality (cf. (19b))?

#### Movement necessary for binding Teleology Double binding Interim summary

 Why, then, must the derivation of a reciprocal sentence in Adyghe have (22) as its underlying form?



• In other words, why does the underlying structure (26) result in ungrammaticality (cf. (19b))?

Movement necessary for binding Teleology Double binding Interim summary

- RECP binding in Adyghe (27) and Kabardian is in fact possible without HIGH ABS movement.
- In e.g. causative sentences where the RECP's antecedent is the ERG causer, binding is independent of HIGH ABS movement.

```
(27) a. te š'eʁen-xe-r

1PL.ERG good-PL-ABS

Ø-ze-re-d-ʁe-ś'efə-ž'ə-ʁe-x

3PL.ABS-RECP-INSTR-1PL.ERG-CAUS-buy-RE-PST-3PL.ABS

'We made each other buy goods.'

[Letuchiy 2013]
```

```
b. [8P šə-re šəpxwə-re ] č'ef-ew adəga-bze-r brother-COORD sister-COORD joyful-ADV Adyghe-language-ABS Ø-ze-r-a-ʁa-ş̂e 3SG.ABS-RECP-INSTR-3PL.ERG-CAUS-know
```

[Vydrin 2008]

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1PL.ERG good-PL-ABS

Ø-ze-re-d-ke-š'efə-ž'ə-ke-x

3PL.ABS-RECP-INSTR-1PL.ERG-CAUS-buy-RE-PST-3PL.ABS

'We made each other buy goods.' [Letuchiy 2013]
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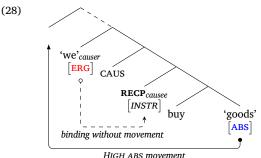
Ø-ze-r-a-ba-şe
3SG.ABS-RECP-INSTR-3PL.ERG-CAUS-know

'The brother and the sister made each other know Adyghe joyfully.'
```

[Vvdrin 2008]

### Movement necessary for binding Teleology Double binding Interim summary

• These causative sentences can be represented as follows:<sup>6</sup>



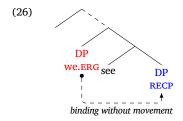
► The causer 'we' binds the RECP causee, and the DP that undergoes HIGH ABS movement is a third element (i.e. the underling theme 'goods').

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<sup>&</sup>lt;sup>6</sup>The *INSTR* assigned to RECP will be discussed in the Proposal ∠.

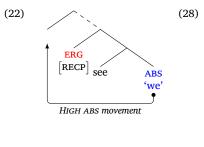
Movement necessary for binding Teleology Double binding Interim summary

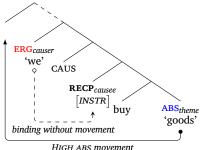
• If RECP binding can be done without movement, then how would a HIGH ABS analysis exclude an underlying structure like (26)?



### Movement necessary for binding Teleology Double binding Interim summary

A HIGH ABS analysis implies, then, that the Adyghe and Kabardian grammar "knows" when movement is a necessary condition for binding (22) and when it is not (28).





Movement necessary for binding Teleology Double binding Interim summary

- A-movement that creates new antecedents for binding should in principle be able to bind any number of variables on its path.
- HIGH ABS movement, however, does not result in multiple binding.
  - (29) a. tə-ze-f-jə-š'a-ʁ 1PL.ABS-RECP-BEN-3SG.ERG-bring-PST 'She brought us to each other.'

[Ershova 2023]

b. \*tə-ze-f-ze-š'a-ʁ 1PL.ABS-RECP-BEN-RECP-bring-PST Intended: 'We brought each other to other.' (Literally: 'Each other brought us to each other.

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A HIGH ABS analysis of (29a):

```
(30) [TP US-ABS [vp she-ERG bring RECP-BEN t]]

① High ABS movement
```

[based on Ershova 2023]

• Following the same logic, double binding in (29b) would then be as follows:

```
(31) [TP us-ABS [vp RECP-ERG bring RECP-BEN t]]
```

As a consequence of HIGH ABS movement, 'us' would be able to bind both instances of RECP, predicting that (29b) is grammatical, contrary to fact.

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### Movement necessary for binding Teleology Double binding Interim summary

As we are going to see later, the RECP prefix can be followed by an instrumental prefix
 re—. If multiple binding is attempted, the result is always ungrammatical, irrespective of
 the presence of re—:

```
(32) [RP dwelet-re nafset-re] ...
Dolet-COORD Nafset-COORD

a. * ... Ø-ze-ze-ke-\lambda ek-x
3PL.ABS-RECP-RECP-CAUS-see-PST-3PL.ABS

b. * ... Ø-ze-re-ze-ke-\lambda ek-x
3PL.ABS-RECP-INSTR-RECP-CAUS-see-PST-3PL.ABS

c. * ... Ø-ze-ze-re-ke-\lambda ek-x
3PL.ABS-RECP-see-PST-3PL.ABS

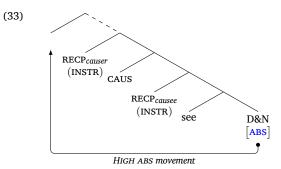
d. * ... Ø-ze-re-ze-re-ke-\lambda ek-x
3PL.ABS-RECP-INSTR-RECP-INSTR-CAUS-see-PST-3PL.ABS

Intended: 'Dolet and Nafset made each other see each other.'
```

(Literally: 'Each other made each other see Dolet and Nafset.')

#### Movement necessary for binding Teleology Double binding Interim summary

• The sentences in (32) can be represented as follows:

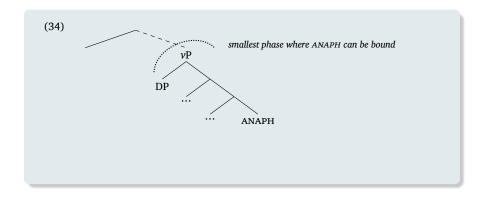


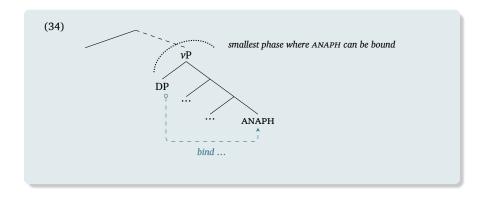
- ► The ABS underlying theme would undergo movement to a position above all arguments, whence it should be able to bind all RECP's on its path.
- ► This prediction is not borne out by facts.

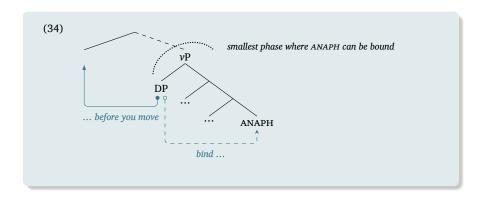
Movement necessary for binding Teleology Double binding Interim summary

- A HIGH ABS analysis faces theoretical and empirical challenges.
- In the next section, I propose an analysis where binding is uniform and the dumbfounding morphosyntax of RECP binding sentences in Adyghe and Kabardian is the byproduct of independent factors.

- Following recent work on binding (Quicoli, 2008; Despić, 2015; Charnavel & Dominique, 2016; Brodkin & Royer, 2024, a.o.), I assume that a binding domain is the smallest phase that contains an anaphor and a c-commanding antecedent.
- Furthermore, binding takes place as soon as possible, provided that all conditions for binding are met.







- The morphosyntactic properties of certain reciprocal sentences in Adyghe and Kabardian makes the underlying structure look as though it is RECP which c-commands its antecedent.
- This morphosyntax will not be taken at face value
- Instead, it will be analyzed as the byproduct of
  - Case properties of RECP
  - ► Independent principles
    - Last Resort
    - Disjunctive Case Hierarchy

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Last Resort INSTR case Predictions Lexical case ERG antecedent Antecedent back to ABS

#### Case deficiency and Last Resort INSTR

- (35) a. The RECP pronoun in Adyghe and Kabardian is unable to participate in the Case Disjunctive Hierarchy.
  - b. The RECP pronoun is assigned *INSTR* as a Last Resort licensing strategy, unless it can be assigned lexical case independently.

Last Resort INSTR case Predictions Lexical case ERG antecedent Antecedent back to ABS

 Recall: the antecedent of a RECP in Adyghe and Kabardian must be assigned ABS and cannot be assigned the expected ERG.

- (19) a. pro te-ze-re-λes<sup>w</sup>ə-s 1PL.ABS 1PL.ABS-RECP-INSTR-see-PST 'We saw each other.'
  - b. \* pro ze-re-t-\lambda es "\text{9-s}.

    1PL.ERG RECP-INSTR-1PL.ERG-see-PST Intended: 'We saw each other.'

[Ershova 2023]

Last Resort INSTR case Predictions Lexical case ERG antecedent Antecedent back to ABS

- This is reminiscent of the morphosyntax of pseudo noun incorporation (PNI) in Niuean.
- When an object is PNI-ed (36b), the subject is assigned ABS, instead of the expected ERG (36a).<sup>7</sup>

#### (36) Niuean

- a. Takafaga tūmau nī [e ia] [e tau ika] hunt always EMPH ERG he ABS PL fish 'He is always hunting fish.'
- b. Takafaga [ ika ] tūmau nī [ a ia ]. hunt fish always EMPH ABS he 'He is always fish-hunting.'

[Massam 2001]

tinyurl.com/cla25sfong Reciprocal binding in Circassian 40 /

<sup>&</sup>lt;sup>7</sup>Importantly, even though a PNI sentence has intransitive morphosyntax, the sentence is still transitive, in the sense that the object of the verb is represented in the syntactic structure. For arguments against an intransitivization analysis of reciprocal sentences in Adyghe, see the Appendix **½**.

- · Licensing and 'deficiency:'
  - ▶ Massam (2001): an object undergoes PNI when it is deficient.
    - In Dependent Case terms: this object is not visible to the Disjunctive Case Hierarchy.
  - Levin (2015): PNI occurs as a Last Resort strategy to license a nominal that cannot otherwise be assigned case.

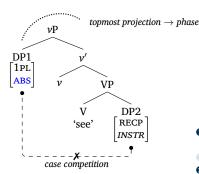
Last Resort INSTR case Predictions Lexical case ERG antecedent Antecedent back to ABS

#### RECP pronoun in Adyghe and Kabardian

- Analogously to the PNI-ed object, the RECP pronoun in Adyghe and Kabardian is not visible to the Case Disjunctive Hierarchy.
- Nonetheless, it must be assigned case in order to be licensed.
- INSTR case is assigned to it as a Last Resort licensing strategy.<sup>8</sup>

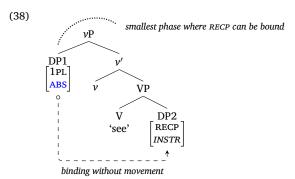
<sup>&</sup>lt;sup>8</sup>This means that the reciprocal prefix re- does not occupy the ERG  $\varphi$ -slot. See Appendix  $\square$ .

- A reciprocal sentence in Adyghe and Kabardian is derived as follows:
  - (37) te-ze-re-\lambda ew^-s 1PL.ABS-RECP-INSTR-see-PST 'We saw each other.'



- a No levicel OBI
  - b. Last Resort *INSTR* assigned to RECP.
- No dependent E
- 3 Unmarked ABS assigned to subject.

- According to this analysis, the RECP's antecedent is assigned ABS because there is no
  case competitor—the RECP is assigned Last Resort INSTR, in accordance with (35).
- Furthermore, binding takes place at the  $\nu P$  level, the smallest phase that contains the RECP, as well as a c-commanding antecedent.



- RECP binding in Adyghe and Kabardian is ordinary and follows universal principles that regulate binding:
  - ► The antecedent is above the RECP.
  - ▶ Binding takes place as soon as possible and the grammar does not have to "know" when HIGH ABS movement is a pre-condition for binding.
- The unordinary-looking morphosyntax of reciprocal sentences in Adyghe and Kabardian is a byproduct of an idiosyncratic property of RECP pronouns in these languages.

Last Resort INSTR case Predictions Lexical case ERG antecedent Antecedent back to ABS

- That it is not far-fetched to attribute such an idiosyncratic property to the RECP pronoun is suggested by the fact that reflexive binding in Adyghe and Kabardian has ordinary morphosyntax:<sup>9</sup>
  - (39) a. wə-tə-wə?a-ʁ (baseline)
    2SG.ABS-1PL.ERG-wound-PST

'We wounded you.'

- b. Zə -tə-wə?a-ʁ (reflexive)
  REFL-1PL.ERG-wound-PST
  - 'We wounded ourselves.'
- c. tə-<mark>ze</mark>-re-wə?a-ʁ (reciprocal)
  1PL.ABS-RECP-INSTR-wound-PST

'We wounded each other.'

[Arkadiev & Letuchy 2011]

<sup>&</sup>lt;sup>9</sup>For a detailed analysis of reflexive binding in Adyghe, see Ershova (2019, 2023).

- The asymmetry between reflexive (39b) and reciprocal (39c) binding sentences can be construed as follows:
  - Reflexive pronoun: a full DP that is visible to the Case Disjunctive Hierarchy, which is, thus, able to be a case competitor for its antecedent.
    - **ERG** antecedent
  - Reciprocal pronoun: case-deficient, which is, thus, unable to be a case competitor for its antecedent.
    - ABS antecedent

Last Resort INSTR case Predictions Lexical case ERG antecedent Antecedent back to ABS

- Indeed, while *INSTR* is obligatory in reciprocal binding sentences (40), it is prohibited in reflexive binding sentences (41):
  - (40) Reciprocal sentence: INSTR obligatory
    - te **pro**<sub>RECP</sub> tə-qe-ze-\*(<u>re</u>-)\\(\text{PECP-\*}\)(INSTR 1PL.ABS-DIR-RECP-\*(INSTR-)see-PST 'We saw each other.')
  - (41) Reflexive sentence: INSTR prohibited
    - a. pro pro<sub>REFL</sub> zə-t-\lambdaek"ə-k 1PL.ERG REFL.ABS REFL-1PL.ERG-see-PST 'We saw ourselves.'

[Ershova 2019]

b. \* te pro<sub>REFL</sub> tə-zə-<u>re</u>-λeu<sup>w</sup>ə-u
 1PL.ABS REFL.INSTR 1PL.ABS-REFL-INSTR-see-PST
 Intended: 'We saw ourselves.'

- If there is some independent source of licensing for RECP, *INSTR* is not required and is, thus, prohibited, since this is a Last Resort strategy.
- The antecedent of a RECP can be assigned ERG, as long as there is a case competitor for it.
  - ► The case competitor can be added via some valency-increasing operation, e.g. in causative sentences.
  - ▶ But: even in such sentences, if potential competitors are taken out from the Case Disjunctive Hierarchy, the RECP's antecedent remains ABS.

- As we saw in (13), there are predicates that are able to assign lexical case to their object.
  - ABS/OBL frame, instead of ERG/ABS frame.
- Prediction: if the object is RECP, then it is assigned lexical OBL, dispensing with Last Resort INSTR.
  - ► This prediction is borne out by facts.

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Last Resort INSTR case Predictions Lexical case ERG antecedent Antecedent back to ARS

- (42)Kabardian (similar data in Adyghe)
  - marjəje pjetjer Ø-je-pseλ-a-š' a. ('speak:' ABS/OBL) Maria.ABS Peter.OBL 3SG.ABS-3SG.OBL-speak-PST-IND
  - 'Maria spoke to Peter.' b. [&P marjəje-re pjetjer-re ] **pro**RECP Maria-COORD Peter-COORD RECP.OBL
    - Ø-ze-psaλ-a-xe-š'

3PL.ABS-RECP-speak-PST-3PL.ABS-IND

'Maria and Peter spoke to each other.'

Drorece

\* pro 3PL.ABS RECP.INSTR Ø-ze-ra-p-seλ-a-xe-š' 3PL.ABS-RECP-INSTR-speak-PST-3PL.ABS-IND Intended: 'They talked to each other.'

(INSTR prohibited)

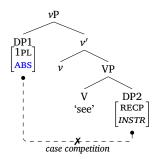
(RECP assigned OBL)

c.

- For ERG/ABS verbs, INSTR is obligatorily assigned to RECP because, otherwise, RECP cannot be licensed.
  - (43) te pro<sub>RECP</sub> tə-qe-ze-\*(re-)\\(\text{Les}\)work

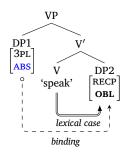
    1PL.ABS RECP.INSTR 1PL.ABS-DIR-RECP-\*(INSTR-)see-PST

    'We saw each other.'



- a. No lexical obt.
  - b. Last Resort *INSTR* assigned to RECP.
- No dependent E
- 3 Unmarked ABS assigned to subject.

- Conversely, for ABS/OBL verbs, INSTR is prohibited in RECP because RECP is already
  assigned lexical case, dispensing with Last Resort INSTR.
  - (44) \* pro pro<sub>RECP</sub> Ø-ze-<u>ra</u>-p-seλ-a-xe-š' 3PL.ABS RECP.INSTR 3PL.ABS-RECP-INSTR-speak-PST-3PL.ABS-IND Intended: 'They talked to each other.'



- a. 'Speak' assigns lexical OBL to RECP.
   b. Last Resort INSTR assigned to RECP.
- No dependent ERG.
- 3 Unmarked ABS assigned to subject.

- According to the analysis proposed here, the RECP's antecedent is assigned unmarked ABS because RECP is not a viable case competitor.
- Prediction: the RECP's antecedent can be assigned dependent ERG as long as a case competitor is available.
  - ▶ This prediction is borne out in causativized transitives: third DP, besides RECP and its antecedent, so it can serve as a case competitor for the latter.

Last Resort INSTR case Predictions Lexical case ERG antecedent Antecedent back to ABS

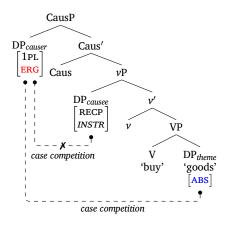
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Last Resort INSTR case Predictions Lexical case ERG antecedent Antecedent back to ABS

(45) te pro<sub>RECP</sub> š'eʁen-xe-r Ø-ze-re-d-ʁe-s'efə-ž'ə-ʁe-x
1PL.ERG RECP.INSTR good-PL-ABS 3PL.ABS-RECP-INSTR-1PL.ERG-CAUS-buy-RE-PST-3PL.ABS
'We made each other buy goods.'10



- a. No lexical **OBL** 
  - Last Resort *INSTR* assigned to RECP.
- **2** a. No dependent **OBL**.
  - b. Dependent ERG assigned to causer.
- Unmarked ABS assigned to underlying theme.

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 $<sup>^{10}</sup>$  If RECP is underlying theme, the antecedent is also ERG, via competition with the causee. See Appendix  $oldsymbol{arnothing}$ .

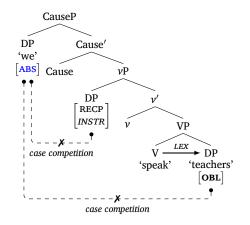
Last Resort INSTR case Predictions Lexical case ERG antecedent Antecedent back to ABS

- Prediction: if the would-be case competitor for the RECP's antecedent is taken out of the Case Disjunctive Hierarchy, it is again assigned unmarked ABS.
- This prediction is borne out in causative sentences where the verb assigns lexical OBL to its theme.
  - Assignment of OBL to theme renders it unable to be a case competitor for RECP's antecedent.

Last Resort INSTR case Predictions Lexical case ERG antecedent Antecedent back to ABS

(46) de pro<sub>RECP</sub> jeʁeʒ'aklwə-ex-em də-ze-r-je-ʁe-pseλ-a-š'
1PL.ABS RECP.INSTR teacher-PL-OBL 1PL.ABS-RECP-INSTR-3PL.OBL-CAUS-speak-PST-IND

'We made each other speak to the teachers.' (*Kabardian*)



- a. 'Speak' assigns lexical OBL to underlying theme.
  - Last Resort *INSTR* assigned to RECP.
- a. No dependent OBL.b. No dependent ERG.
- 3 Unmarked ABS assigned to causer.

Last Resort INSTR case Predictions Lexical case ERG antecedent Antecedent back to ABS

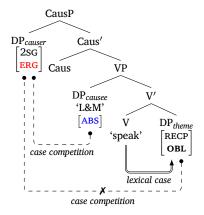
- RECP's antecedent (in (46), also the causer) is assigned ABS because there is no case competitor for it:
  - Causee RECP is assigned Last Resort INSTR, by (35).
  - ► Underlying theme is assigned lexical **OBL** by the verb.
- Prediction: if RECP is underlying theme and, thus, takes up lexical OBL, there is again a
  case competitor for its antecedent, viz. the causee.

Last Resort INSTR case Predictions Lexical case ERG antecedent Antecedent back to ABS

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  - ► Causee RECP is assigned Last Resort *INSTR*, by (35).
  - ▶ Underlying theme is assigned lexical **OBL** by the verb.
- Prediction: if RECP is underlying theme and, thus, takes up lexical OBL, there is again a
  case competitor for its antecedent, viz. the causee.

Last Resort INSTR case Predictions Lexical case ERG antecedent Antecedent back to ABS

(47) we [ap mjerjose-re larjos-re] pro<sub>RECP</sub> Ø-ze-b-ʁe-pse\lar-a-š'
2SG.ERG Larise-COORD Merisa-COORD RECP.OBL 3PL.ABS-RECP-2SG.ERG-CAUS-speak-PST-IND
'You made Merisa and Larise speak to each other.' (Kabardian)



- a. 'Speak' assigns lexical OBL
  to RECP.
- b. No Last Resort *INSTR*.
- a No dependent OBI
  - Dependent ERG assigned to causer.
- 3 Unmarked ABS assigned to causee.

- Despite appearances, reciprocal sentences in Adyghe and Kabardian are ordinary.
- As in other languages, RECP can be uniformly generated below its antecedent, and binding can take place as early as possible.
- The particular morphosyntax that these sentences exhibit is a byproduct of:
  - ► The case deficiency of the RECP pronoun in Adyghe and Kabardian.
  - ► The strategy employed to license it (viz. Last Resort *INSTR*).
  - ► The independent workings of the Disjunctive Case Hierarchy.

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  - ► The case deficiency of the RECP pronoun in Adyghe and Kabardian.
  - ► The strategy employed to license it (viz. Last Resort *INSTR*).
  - ► The independent workings of the Disjunctive Case Hierarchy.

- The Ban on ergative anaphors (3) holds of Adyghe and Kabardian too.
  - (3) The ban on ergative anaphors
    In many ergative languages, anaphors cannot surface as ergative external arguments.

[Brodkin & Royer 2024]

→ Reciprocal binding in Adyghe and Kabardian does not provide empirical support for a HIGH ABS theory of syntactic ergativity, nor for the claim that syntactic ergativity can be exhibited in an A-type of phenomenon.

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Reciprocal binding in Adyghe and Kabardian does not provide empirical support for a HIGH ABS theory of syntactic ergativity, nor for the claim that syntactic ergativity can be exhibited in an A-type of phenomenon.

### Thank you!

First and foremost, thank you to R. Khuranova and R. Kanshau for sharing their knowledge with me. Without their partnership, this work would not be possible. Many thanks to V. Minakova for putting me in contact with them and for indispensable logistical support. I am indebted to Y. Lander and P. Arkadiev for their insights and for generously sharing their vast knowledge of Adyghe and Kabardian with me. Finally, I thank audiences at MUN and at Yale for taking the time to hear previous versions of this work and for their feedback.

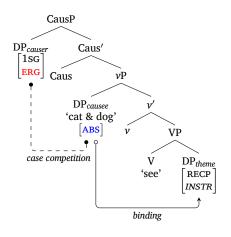
RECP as theme  $\varphi$ -template Intransitivization ze vs. zere Double binding

 For completeness, in a causative sentence where the verb has an ERG/ABS pattern, and the RECP is the underlying theme, case assignment goes as follows:

#### RECP as theme $\varphi$ -template Intransitivization ze vs. zere Double binding

(48) pro [&p čətəwə-m-re ha-m-re] pro<sub>RECP</sub>
1SG.ERG cat-OBL-COORD dog-OBL-COORD RECP.INSTR
Ø-ze-re-z-ke-\text{-ket} \times-s-ke-x
3PL.ABS-RECP-INSTR-1SG.ERG-CAUS-see-PERF-PL
'I made the cat and the dog see each other.'

[Letuchiy 2014]



- a. No lexical **OBL**.
  - Last Resort INSTR assigned to RECP.
- **2** a. No dependent **OBL**.
  - Dependent ERG assigned to causer.
- 3 Unmarked ABS assigned to causee.

RECP as theme  $\varphi$ -template Intransitivization ze vs. zere Double binding

• (49a) is the template of  $\varphi$ -prefixes in Adyghe and Kabardian, and (49b) is the template assumed by previous analyses for reciprocal sentences, where the RECP prefix is assumed to replace the  $\varphi$ -prefix that crossreferences ERG arguments.

(49) a. ABS.
$$\varphi$$
-OBL. $\varphi$ -ERG. $\varphi$ - CAUS- $\sqrt{\dots}$  (-3PL.ABS)  
b. ABS. $\varphi$ - RECP-  $\sqrt{\dots}$ 

According to the analysis proposed here, the RECP prefix actually occupies a slot for a φ-prefix that crossreferences oblique arguments, since it is assigned Last Resort *INSTR* (50b).

```
(50) a. ABS.\varphi-OBL.\varphi-ERG.\varphi- CAUS-\sqrt{\dots} (-3PL.ABS)
b. ABS.\varphi-RECP- \sqrt{\dots}
```

RECP as theme  $\varphi$ -template Intransitivization ze vs. zere Double binding

- The relative positions of the morphemes in (49b) and (50b) are the same.
- But (50b) explicitly predicts that an ERG  $\varphi$ -prefix is possible, alongside the RECP prefix.11

š'eĸen-xe-r

This prediction is borne out by facts in e.g. causative sentences.

'I made the cat and the dog see each other.'

(51)

a. te

 $pro_{RECP}$ 1PL.ERG RECP.INSTR good-PL-ABS Ø-ze-re-d-ke-š'efa-ž'a-ke-x 3PL.ABS-RECP-INSTR-1PL.ERG-CAUS-buy-RE-PST-3PL.ABS 'We made each other buy goods.' [Letuchiv 2013] b. pro [&p čətəwə-m-re ha-m-re ] prorece cat-OBL-COORD dog-OBL-COORD RECP.INSTR  $\sqrt{\phantom{0}}$ -ze-re-z-ke- $\lambda$ -ke- $\mathbf{x}$ 3PL, ABS-RECP-INSTR-1SG, ERG-CAUS-see-PERF-PL

[Letuchiv 2014]

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 $<sup>^{11}</sup>$ This configuration is *compatible* with a HIGH ABS analysis, but not directly predicted by it, since this type of analysis does not straightforwardly state when HIGH ABS movement is a pre-condition for RECP binding and when it is not-see previous discussion ...

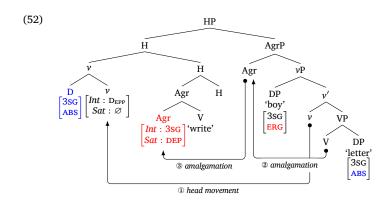
RECP as theme  $\, \varphi ext{-template} \,$  Intransitivization  $\, ze \,$  vs.  $\, zere \,$  Double binding

- It is worth noting that both sentences in (51) have the same φ-prefixes, irrespective of whether the RECP is interpreted as the causee (51a), or as the underlying theme (51b).
- Thus, unlike what the HIGH ABS analysis proposed in Ershova (2019, 2023) claims, the
  position of the reciprocal prefix does not track the position occupied by the RECP
  pronoun it crossreferences.

RECP as theme  $\, \varphi ext{-template} \,$  Intransitivization  $\, ze \,$  vs.  $\, zere \,$  Double binding

- For concreteness, following Driemel et al. (2020, 2021), I assume that the ERG  $\varphi$ -prefix is an instance of true agreement (specifically, Agree with Agr in (52)), and that ABS and OBL  $\varphi$ -prefixes are instances of clitic-doubling.
- The verb then undergoes head movement (more precisely, Amalgamation, defined in Harizanov & Gribanova 2019) and adjoins to the head H, the target of clitic-doubling.

RECP as theme  $\, \varphi ext{-template} \,$  Intransitivization  $\,$  ze vs.  $\,$  zere  $\,$  Double binding



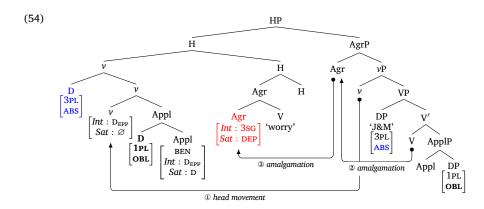
RECP as theme  $\varphi$ -template Intransitivization ze vs. zere Double binding

- In Adyghe and Kabardian,  $\varphi$ -prefixes that crossreference applied arguments (including RECP that was assigned *INSTR*) are immediately followed by an applicative prefix.
  - (53) sə-qə-t-**de**-p-fə-r-a-ʁa-ʒ̆e-š´tə-ʁ 1SG.ABS-DIR-1PL.IO-COM-2SG.IO-BEN-3SG.IO-3PL.ERG-CAUS- read.AP-AUX--PST 'They were making me read it to you together with us.'

[Lander & Letuchiy 2010]

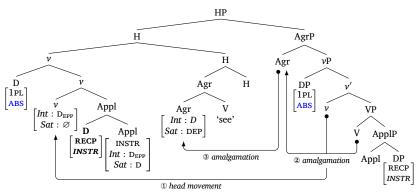
• I analyze this as the result of Appl Agreeing with its argument first, triggering clitic-doubling. Subsequently, the complex head Appl undergoes clitic-doubling to H.

RECP as theme  $\,\,\phi ext{-template}\,\,$  Intransitivization  $\,\,$ ze vs.  $\,$ zere  $\,\,$  Double binding



RECP as theme  $\varphi$ -template Intransitivization ze vs. zere Double binding

#### (55) Reciprocal sentence, e.g. (37):



- Besides a HIGH ABS analysis, the morphosyntax of reciprocal binding sentences in Adyghe has been analyzed in terms of intransitivization (Letuchiy, 2007).
- A valency-decreasing operation is particularly well-suited to account for the fact that a reciprocal sentence in Adyghe has an ABS subject (i.e. the antecedent).
  - ▶ Indeed, an intransitive subject ergative languages is marked ABS (see (9)).

- However, there are a few arguments against an intransitivization analysis for reciprocal sentences in Adyghe and Kabardian.
  - See Ershova (2019, 2023) for additional discussion.

RECP as theme  $\varphi$ -template Intransitivization ze vs. zere Double binding

• First, irrespective of the scope of reciprocalization and causativization the  $\varphi$ -prefixes appear in the same order.

```
(??') a. CAUS \rightarrow RECP: [causer.PL<sub>1</sub> CAUSE [each other<sub>1</sub> V ...]]

ABS.\phi_{theme}- RECP<sub>causee</sub>- ERG.\phi_{causer}-CAUS-\sqrt{\dots} [= (51a)]

b. RECP \rightarrow CAUS: [causer.SG/PL CAUSE [causee.PL<sub>1</sub> V each other<sub>1</sub>]]

ABS.\phi_{causee}-RECP<sub>theme</sub>- ERG.\phi_{causer}-CAUS-\sqrt{\dots} [= (51b)]
```

RECP as theme  $\varphi$ -template Intransitivization ze vs. zere Double binding

- This contrasts with languages where causativization and reciprocalization are both instances of valency-changing operations, exponed by derivational affixes.
- In e.g. Quechua, the semantic scope of these operations is reflected by the morpheme (i.e. the Mirror Principle, Baker 1985):

#### (56) Quechua

- a. REFL  $\rightarrow$  CAUS: [causer CAUSE [causee<sub>1</sub> V self<sub>1</sub>]] mayla-**ku-chi-n**. wash-REFL-CAUS-3SG 'He causes someone<sub>i</sub> to wash themselves<sub>i</sub>.'
- $\text{b. } \mathsf{CAUS} \to \mathsf{REFL:} \ [\mathsf{causer}_1 \ \mathsf{CAUSE} \ [\mathsf{self}_1 \ \mathsf{v} \ \ldots]]$

mayla-**chi-ku**-n. wash-CAUS-REFL-3SG

'He $_i$  causes himself $_i$  to wash someone.'

- Second, true derivational affixes of the valency-changing type tend to be closer to the stem (Haspelmath et al., 2004).
  - ▶ This is indeed what we see in Quechua (56), where the reflexive and causative suffixes are closer to the stem, with subject agreement being outside of both.
- Conversely, in Adyghe and Kabardian, the causative prefix is adjacent to the stem, while the RECP prefix occurs alongside other  $\varphi$ -prefixes, which are farther from the stem.

- Third, at least in Adyghe, the RECP pronoun does not have to be an argument of the verb to which the RECP prefix is affixed:
  - (57) te [SC **pro**RECP 2"oš-ew ] tə-**ze**-re-\lambdate-z'\rangle

    1PL.ABS RECP.INSTR clever-ADV 1PL.ABS-RECP-INSTR-consider-RE

    'We consider each other clever.'
    - ► In (57), the RECP pronoun is the subject of the predication (a "small clause") subcategorized for by 'consider.'
    - Presumably, this verb is still transitive, despite the fact that the RECP ze— is affixed to it.

- In the present analysis, the intransitive-looking morphosyntax of reciprocal binding sentences in Adyghe and Kabardian (when the verb has an ERG/ABS pattern) does not result from a valency-decreasing operation.
- Just as in Niuean PNI (36), there is no change in the argument structure of the verb.
   The morphosyntax of the sentence is the byproduct of the strategy employed to license a case-deficient element
  - ▶ Niuean: PNI-ed object is not a viable competitor to feed ERG, and is licensed via adjacency with the verb.
  - Adyghe and Kabardian: RECP is not a viable competitor to feed ERG, and is licensed via Last Resort INSTR assignment.

RECP as theme  $\varphi$ -template Intransitivization ze vs. zere Double binding

- Ershova (2019, 2023) takes *zere* to be a monomorphemic string and, furthermore, that *ze* and *zere* are allomorphs:
  - ► ze-: applied object position<sup>12</sup>
  - zere-: ergative or causee position.
- Conversely, in the present analysis, ze-re- is taken to be a  $\varphi$ -prefix that indicates Agree with the RECP pronoun, followed by an *INSTR* prefix (i.e. 'RECP-INSTR-').

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 $<sup>^{12}</sup>$ In the terminology adopted in this paper, this means the object position of a verb that is able to assign lexical case.

RECP as theme  $\,\,\phi$ -template Intransitivization  $\,$  ze vs. zere  $\,$  Double binding

- Empirically, an argument in favor of separating *ze* and *re* is provided by the fact that these morphemes can occur separately (58b).
  - (58) a. tə-**ze-re**-wə?a-ʁ 1PL.ABS-RECP-INSTR-wound-PST 'We wounded each other.'
    - b. tə-ze- ?eĕ'e -re-wə?a-ʁ 1PL.ABS-RECP-INADV-INSTR-wound-PST 'We wounded each other accidentally.'

[Lander & Letuchiy 2010]

RECP as theme  $\, \phi$ -template Intransitivization  $\, {\it ze \, vs. \, zere} \,$  Double binding

- Theoretically, the claim that *ze* and *zere* are allomorphs can raise suspicion because there does not seem to be a unique context where *ze* (or *zere*–) occurs.
- For instance, ze- can be adjacent to a an applicative prefix (59a) or not (59b).
  - (59) a. te **pro**<sub>RECP</sub> ž'ənes tə-ze-fe-g<sup>w</sup>əmeç'-əž'ə (Adyghe) 1PL.ABS RECP.OBL still 1PL.ABS-RECP-BEN-worry-PRES 'We still worry about each other.'
    - b. [<sub>&P</sub> marjəje-re pjetjer-re ] **pro**<sub>RECP</sub>

      Maria-COORD Peter-COORD RECP.OBL

      Ø-ze-psaλ-a-xe-š' (Kabardian)

      3PL.ABS-RECP-speak-PST-3PL.ABS-IND

      'Maria and Peter spoke to each other.'

RECP as theme  $\, \, \phi \,$ -template  $\,$  Intransitivization  $\,$   $\,$  ze  $\,$  vs.  $\,$  zere  $\,$  Double binding

- As mentioned above, zere— is taken to be the allomorph that occurs in ergative or causee position.
- Once again, there does not appear to be a unified context of occurrence for the purported zere—.
- In principle, either *ze-* or *zere-* could be taken to be an elsewhere allomorph. However, this could not hold of both simultaneously.

- Relatedly, allomorphy is usually taken to be conditioned locally (see e.g. Choi & Harley 2019 and references therein).
- Because, as just mentioned, there is no single context that unifies the occurrence of either ze- or zere-, there does not appear to be a viable way to state a local conditioning environment for the occurrence of either.

RECP as theme  $\, \varphi ext{-template} \,$  Intransitivization  $\,$   $\,$   $\,$   $\,$   $\,$   $\,$   $\,$   $\,$  Double binding

- Conversely, the present analysis can readily account for the non-contiguous occurrence of *ze* and *re* in (58b) because these are taken to be separate morphemes.
- In the present analysis, there is no allomorphy:
  - $\triangleright$  ze– is always a  $\varphi$ -prefix that crossreferences a (null) RECP pronoun.
  - ▶ The distribution of *re*− in turn is predictable from when Last Resort *INSTR* assignment is triggered:
    - If lexical **OBL** is available to RECP, Last Resort *INSTR* is not called for  $\rightarrow$  (\*re-).
    - Otherwise, Last Resort *INSTR* needed to license RECP, by (35)  $\rightarrow$  \*(re-).

RECP as theme  $\varphi$ -template Intransitivization ze vs. zere Double binding

 To recall, a High ABS analysis predicts that High ABS movement should be able to bind any number of anaphors on its path.

```
(60) * tə-ze-f-ze-š'a-ʁ

1PL.ABS-RECP-BEN-RECP-bring-PST

Intended: 'We brought each other to other.'

(Literally: 'Each other brought us to each other.')
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- The current analysis does not make this prediction.
- Under commonplace assumptions about binding, a sentence like (60) is predicted to be ungrammatical simply because the higher RECP (i.e. the one crossreferenced by the zeprefix closer to the stem) cannot be bound.
  - ► This is a straightforward Condition A violation.

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