Roviana fronting and the relationship between syntactic and morphological ergativity

1 Introduction

- A syntactically ergative phenomenon groups S (the intransitive sole argument) and P (the transitive object) to the exclusion of A (the transitive subject).
- A classic example: in West Greenlandic, only S and P (not A) may be relativized.

1. \[\text{miqqa-}t\text{i} [t\text{i sila-mi} \text{pinnguar-tu-t}]\]
   \[\text{child-ABS outdoors play} \quad \text{Bittner 1994}\]
   ‘the children who are playing outdoors.’

2. \[\text{miqqa-}t\text{i} [\text{Juuna-p} t\text{i paari-sa-i}]\]
   \[\text{child-ABS Juuna-ERG look.after} \quad \text{‘the children that Juuna is looking after.’}\]

3. *\[\text{angut}_{A} [t\text{i aallaat tigu-sima-sa-a}]\]
   \[\text{man.ABS gun.ABS take} \quad \text{‘the man who took the gun.’}\]

- So far, the literature on syntactic ergativity has examined ‘absolutive-only’ phenomena, i.e., phenomena applying to absolutives but not ergatives.

- Polinsky 2016 even defines the term syntactic ergativity in ‘absolutive-only’ terms:

2. Syntactic ergativity (Polinsky 2016:9):
   the inaccessibility of ergative arguments to A’-movement ... as contrasted with the accessibility of absolutive arguments to such movement.

- **Our key question**: what is the status of ‘ergative-only’ syntactic phenomena?
  - We observe a A’-movement phenomena in Roviana (Oceanic; Solomon Islands) which applies only to non-absolutive core arguments.
  - We show that ‘inversion’-based theories of ergativity don’t generalize to such phenomena.

- We argue that the Roviana case study supports a feature-based approach to ergativity (along the lines of Deal 2016; Marantz 1991; Otsuka 2006, and so on), as opposed to an inversion-based account.

- In particular, we propose a category of features on nominals, signalling their relative rank along a thematic hierarchy, in the style of Kiparsky 1997.

- The paper suggests a new way to distinguish ergative and non-ergative languages as featurally distinct.

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2 Roviana ergativity

2.1 Morphological ergativity

- Roviana is a verb-initial language with an ergative-absolutive alignment in case marking.
- Roviana word order: VS in intransitive clauses, VAO in transitive clauses.

(3) *mae [sa siki]$_S$
    come ABS dog
    ‘The dog comes.’ Intransitive VS

(4) *taka=ia [Bili]$_A$ [sa siki]$_P$
    kick=3SG.OBJ Bill ABS dog
    ‘Bill kicked the dog.’ Transitive VAP

- A pronominal clitic on the verbal complex indexes the φ-features of P.

    kick=1SG.OBJ 3SG ABS 1SG
    ‘He kicked me.’

    kick=2SG.OBJ 1SG ABS 2SG
    ‘I kicked you.’

- We assume the following forms for m-case markers and a semantically unmarked determiner.

<table>
<thead>
<tr>
<th>Case markers</th>
<th>Determiner</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERG</td>
<td>ϕ</td>
</tr>
<tr>
<td>ABS</td>
<td>si</td>
</tr>
<tr>
<td>DAT</td>
<td>koa</td>
</tr>
<tr>
<td>Common noun</td>
<td>sa</td>
</tr>
<tr>
<td>Pronoun</td>
<td>ϕ</td>
</tr>
<tr>
<td>Proper noun</td>
<td>e</td>
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</tbody>
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- The case-markers and determiner form portmanteaus.

(7) Common noun  sa  sa  koa  sa
    Pronoun      ϕ  si  koa
    Proper noun  e  se  koa

- In the case of A, the determiner is present if the argument is fronted.

(8) *{sa siki | asa | e Bili} hena=ia sa rereke
    D dog  | 3SG | D Bill eat=3SG.OBJ ABS mango
    ‘The dog/(s)he/Bill ate the mango.’

- If A is post-verbal, neither the case marker nor determiner appear.

(9) *hena=ia {siki | asa | Bili} sa rereke
    eat=3SG.OBJ dog  | 3SG | Bill ABS mango
    ‘The dog/(s)he/Bill ate the mango.’
2.2 Syntactic ergativity

• As in (8), A may be fronted pre-verbally, for wh-questions, topicalization etc, with no extra material.

• To front S and P, the absolutive marker *si must be inserted.

• We refer to the fronting in (10-a) as ‘null-fronting’ and the fronting in (10-b) as ‘si-fronting’.

(10) a. [esei]ₐ (*si) hena=ia  sa  rereke
    who  ABS  eat=3SG.OBJ  ART  mango
    ‘Who ate the mango?’  null fronting

    b. [esei]ₛ/ₚ *(si) {taloa | taka=ia  Bili}
    who  ABS  left  kick=3SG.OBJ  Bill
    ‘Who left/Who did Bill kick?’  si fronting

• Both *si- and null-fronting are instances of long-distance extraction.
  – They can both cross clause boundaries, and they both trigger island effects.

• These effects are shown below for null-fronted As.

(11) a. eseı balabala=n=ia  agoi  hena=ia  [GAP]  sa  rereke?
    who  think=APPL=3SG you  eat=3SG.OBJ  ART  mango
    Who do you think ate the mango?

    b. *eseı  ele  kamo  si  goi  mudina  ngaza=au  [GAP]?
    who  ASP  arrive  ABS  you  after  hugged=1SG
    *Who did you arrive after hugged me?

• We argue for the following informal characterization of null-fronting:

(12)  Null-fronting generalization:
only non-absolutive core arguments may be null-fronted

• Why make null-fronting ‘anti-absolutive’? We find that dative core arguments (R) can be fronted.

(13)  koe  Pita  ele  vala=ia  Zone  sa  heta
    DAT  Peter  PERF  give=3SG John  ART  betelnut
    John gave Peter the betelnut.

• In general non-core obliques are unable to be null fronted.³

(14) a. *pa  inuma  garat=au  siki  si  rau
    LOC  garden  ABS  bite=3SG.OBJ  dog  ABS  1SG
    ”The dog bit me in the garden”

    b. *pa  velvelu  kote  tozi=ni=go  rau.
    LOC  evening  FUT  tell=APPL=2SG.OBJ  1SG
    I will tell you in the evening.

³Though we do see obliques fronting as constrastive topics, with a marked intonation break. We believe this is a distinct sort of operation, though further diagnostics are needed.
• Is Roviana null-fronting an instance of syntactic ergativity?
  – We take any syntactic phenomenon to be ergative if it distinguishes S and P from A.
• Roviana null-fronting is somewhat unusual, as it excludes S and P.
• Other syntactically ergative A’-extraction phenomena exclude A, e.g., W. Greenlandic relative clause formation (data from Bittner 1994:55–58).

(15) a. \[miiqqa-t_i_t_i\textit{ sila-mi pinnguar-tu-t}\]  
  child-ABS outdoors play  
  ‘the children who are playing outdoors.’

b. \[miiqqa-t_i Juuna-p t_i\textit{ paari-sa-i}\]  
  child-ABS Juuna-ERG look.after  
  ‘the children that Juuna is looking after.’

c. \*[angut_i_A t_i aallaat tigu-sima-sa-a]\]  
  man.ABS gun.ABS take  
  ‘the man who took the gun.’

• We argue that any theory of syntactic ergativity must account for ‘anti-absolutive’ phenomena (like Roviana null fronting) as well as ‘anti-ergative’ phenomena (like West Greenlandic relative clauses).

3 Approaches to extraction restrictions
• ‘anti-absolutive’ phenomena are a challenge to some theories extraction restrictions.
• We argue for a Case-based account following Otsuka 2006, 2010 and Deal 2016.

Inversion-based approaches
• A prominent theory of ergativity (e.g., Aldridge 2004; Coon, Mateo Pedro, and Preminger 2015)
  – In a transitive clause, A and P ‘invert’, via movement of P above A (e.g., for Case)

(16) ![Inversion-based approaches diagram](image)

  e.g., movement of P to a higher Spec, νP

• Proposed reasons why inversion blocks the movement of A:
  – P intervenes between A and its potential landing site (Campana 1992)
P occupies an intermediary position necessary for A’s movement (Aldridge 2004)

P, but not A, moves above an intervening phase boundary (Coon et al. 2015).

- A priori, we disfavor inversion-based accounts.
  - Intervention-based approaches must explain why inversion doesn’t block extraction of all vP-internal material (see Assmann et al. 2015).
  - Syntactically ergative languages don’t always show evidence of inversion (see Polinsky 2016), requiring stipulation of covert inversion (Aldridge 2004 on Tagalog).

- Empirically, we argue that inversion cannot account for anti-absolutive phenomena.
- Recall null-fronting of both S and P is blocked in Roviana.

(17) [esi]_{S/P} *(si) {taloa | taka=ia Bili}
who ABS left kick=3SG.OBJ Bill
‘Who left/Who did Bill kick?’

An obvious adaptation of the inversion-based account simply requires A to block P.

But neither the standard account nor this adaptation explains why extraction of S is blocked in (17).

- No other core argument blocks the extraction of S.
- Further, inversion-based accounts (see Coon et al. 2015) require intransitives to not impose phase boundaries on extraction. No obvious reason why S should be blocked from moving.

Thus, inversion doesn’t provide a unified explanation of anti-absolutive and anti-ergative extraction.

Case-based approaches

- Otsuka 2006 argues against the inversion-approach for Tongan syntactic ergativity.
- Instead, Otsuka proposes that ergative A’-extraction in Tongan is ‘case-sensitive’.
  - Arguments receive Case features in the syntax proper (see also Aldridge 2004; Legate 2008 etc.)
Extraction operations target Case features: W. Greenlandic relative clause formation targets [ABS].

Extraction of A is blocked simply because its Case feature is [ERG] (and thus not targetted).

Deal 2016; Otsuka 2006, 2010 criticize inversion-approaches as they require ergative to be inherent (A receives Case in Spec, vP), contra Baker 2014; Deal 2019 and others.

– Case-based approaches impose no such requirement.

Further, the link between morphological and syntactic ergativity is clear:

– both syntactic and morphological rules target Case features.

Applying the case-based approach to Roviana:

(20) a. [esei]s/p *(si) {taloa | taka=ia Bili} who ABS left kick=3SG.OBJ Bill ‘Who left/Who did Bill kick?’ si fronting S/P
b. [esei]A *(si) hena=ia sa rereke who ABS eat=3SG.OBJ ART mango ‘Who ate the mango?’ null fronting A

Case-based account of Roviana

a. si-fronting targets [ABS]4
b. null-fronting targets [ERG] ∨ [DAT]

This approach satisfies the basic data. Next, we adapt the proposal to eliminate the disjunction in (b).

The proposal is a feature-based theory of grammatical relations.

4At least for wh-questions. In declaratives, any core argument can si-front. We take the heterogeneity of si-fronting as further evidence against an inversion based approach to syntactic ergativity, following Polinsky 2016.
4 A streamlined theory of grammatical relations

- Our approach adapts Otsuka’s Case-sensitive approach: extraction operations target features.
- However, unlike Otsuka, these operations don’t target Case features.
  - Rather, we propose a new category of grammatical relation (GR) features.
  - Both morphological case and extraction rules are sensitive to GR features.

4.1 GR features

- Like case in Marantz 1991, GR features are assigned to core arguments configurationally.
- Following the system in Kiparsky 1997, GR features mark a core argument’s thematic ranking.
- We spell this out in terms of relative c-command within a relevant domain (for us, a clause).

Assigning highest role features $[-HR]/[+HR]$

a. To any DP c-commanded by another DP, assign $[-HR]$.
b. Elsewhere, i.e., if there is no c-commanding DP, assign $[+HR]$.

Assigning lowest role features $[-LR]/[+LR]$

a. To any DP c-commanding another DP, assign $[-LR]$.
b. Elsewhere, i.e., if there is no c-commanded DP, assign $[+LR]$.

- Features are assigned on merge, i.e., in non-derived positions only.
- Below is a toy language showing the distribution of GR features.

- We immediately have formal definitions for some intuitive notions, e.g.:

a. **Subject**: The argument bearing $[+HR]$
b. **Direct Object**: The argument bearing $[+LR]$ and $[-HR]$
c. **Indirect Object**: The argument bearing $[-HR]$ and $[-LR]$

- The requirement that all clauses with arguments have subjects is derived as an entailment.

- The ‘EPP’: If there is at least one core argument, there is a subject.
4.2 Linking features with phenomena

Case marking

- GR features are assigned at merge, so they are visible to the syntax proper.

(27) Feature to m-case mapping (sequenced):

a. Absolutive m-case: $[+\text{LR}] \Rightarrow /s\text{i}/$

b. Dative m-case: $[-\text{HR}] \Rightarrow /\text{ka}/$

- This ensures absolutive $s\text{i}$ marks S and P, while dative $\text{ka}$ marks R.
- No specific m-case rule is specified for A in Roviana, deriving the unmarked ergative.

Fronting

- We leave the precise structure of $s\text{i}$- and null-fronting for future work.
- What we can implement at this stage is the argument-structural sensitivity of each type of fronting.
  - Here, $s\text{i}$-fronting is analyzed as a cleft. The C head is specified to attract only $[+\text{LR}]$ (absolutive).

(28) Example implementation (tentative analysis): $s\text{i}$-fronting is clefting

(29) Tentative analysis: null-fronting is ordinary A’-mvt
• As only \([-LR]\) arguments move, we target only A (ergatives) and R (datives).

• \([-LR]\) groups A and R. We eliminate the disjunction ([\text{ERG}] \lor [\text{DAT}]) from the Case-based approach.

Object clitics

• One key reason to shift to the more abstract GR features over Case features:
  – Not all morphosyntactic processes in Roviana are sensitive to Case.
  – GR features offer a unified approach.

• Roviana object clitics track the \(\phi\)-features of the direct object.
  – To implement a Case-sensitive rule for clitics, we’d need an [\text{ACC}] feature.
  – But no accusative m-case (i.e., on direct objects only) is realized in Roviana.
  – If the clitic targets [\text{ABS}] we wrongly predict it appears on intransitives.

(30) a. \(\text{mae}(*=\text{ia})\) \(\text{si}\) \(\text{asa}\)
  come=3SG.OBJ ABS 3SG
  ‘She/he comes.’ \hspace{1cm} \text{Intransitive VS}

b. \(\text{taka}*(=\text{ia})\) \(\text{Bili}\) \(\text{sa}\) \(\text{siki}\)
  kick=3SG.OBJ Bill ART dog
  ‘Bill kicked the dog.’ \hspace{1cm} \text{Transitive VAP}

• Thus, operations which target GRs but not case are independently necessary for Roviana.

(31) \text{object clitics} \(\phi\)-agree with objects

\[
\begin{tikzpicture}
  \node (v) {V};
  \node (dp) [below right=of v] {DP\text{[+LR,−HR]}};
  \node (dpalt) [below left=of v] {V\text{[u\(\phi\)[+LR,−HR]]}};
  \draw [->] (v) -- (dp);
  \draw [->] (v) -- (dpalt);
\end{tikzpicture}
\]

5 The ergative parameter

• A generalization: no morphologically accusative languages show syntactic ergativity (Dixon 1979).

• Nothing in the present system rules out an “absolutive-only” extraction rule in, e.g., German.
  – A language could assign accusative to \([-HR]\), but A’-movement targets \([+LR]\).

• To curb this, we suggest a new perspective on the “ergative parameter”.

(32) \textbf{Ergative languages:}

Ergative languages are those with \([\pm LR]\) features.

• A sketch for languages without \([\pm LR]\) features (non-ergative languages):
• The profile of a \([+/−HR]\)-only language like in (33).
  – Now, S and A aren’t distinguishable (both marked \([+HR]\)).
  – Moreover, S \((+HR)\) and P \((-HR)\) are not featurally grouped.
  – P and R aren’t distinguished via GR-features, but could be distinguished positionally/thematically.

• Japanese etc. can be analyzed like (33): predicting no absolutive/ergative aligned phenomena.

• A final problem:
  – What we call ‘ergative languages’ have \([±LR]\) and \([±HR]\)
  – This accounts for why such languages have strictly more options.
  – They allow either accusative or ergative aligned agreement/extraction etc.

• But, such a system permits an unattested language type:
  – Nominative/accusative case marking (using \([+HR]\) and \([-HR]\))
  – Ergative/absolutive extraction/agreement (using \([+LR]\) and \([-LR]\))

• To rule this out, we stipulate a constraint on languages with \([±LR]\) (ergative languages).

(34) **The ‘use it or lose it’ principle on m-case:**

Ergative languages must impose an m-case rule of the format: \([±LR] \Rightarrow X\)
where \(X\) is some (possibly empty) string

• This principle ensures that only languages with ergative/absolutive m-case systems will dem-onstrate syntactically ergative phenomena.

• One could think about (34) in terms of parameter setting: a learner observes ergative/absolutive m-case and thus infers the language uses \([±LR]\) features.

• Absent such evidence, the learner posits a system like (33).
6 Conclusion

- Syntactic ergativity sheds light on:
  - the intersection between morphology and syntax
  - how syntactic phenomena are sensitive to argument structure
  - how morphological case is linked to related phenomena

- We argue that an ‘anti-absolutive’ restriction observed in Roviana bears on our understanding of syntactic ergativity:
  - The phenomena biases against an ‘inversion’-based account of ergativity
  - It is well suited to a feature based account, e.g., one that targets features marking abstract Case or grammatical relations.

- We propose a new understanding of (syntactic) ergativity, one that involves signalling an argument’s grammatical relation featurally.

- We maintain that this approach opens up new ways of understanding ergative phenomena.

References


